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ON

SOME MODERN THEORIES CONCERNING HYSTERIA.

Delivered before the Royal College of Physicians of London on March 19th, 24th, and 26th, 1914,

BY J. A. ORMEROD, M.D. OXON., F.R.C.P. LOND.,

REGISTRAR TO THE COLLEGE; CONSULTING PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN SQUARE.

LECTURE II.[1]

Delivered on March 24th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—In my first lecture I considered some of the most striking symptoms of hysteria with the view of showing the difficulty in choosing absolutely between the two alternative methods of explaining them—namely, the physiological and the psychological. I must now turn to the various theories that have been propounded about this disease, limiting myself for brevity's sake to a few, and to recent theories only.

Briquet, the pioneer in modern studies of hysteria, says that it is a disorder of that part of the nervous system which subserves the emotions. Dejerine says: "What emotion can produce as temporary effects, hysteria can produce as lasting effects." Sir Bryan Donkin lays stress on exaggerated impressionability or tumultuous emotion as a principal factor in the disease. Oppenheim holds that hysteria is a disorder of the mind, principally affecting the emotional sphere, and consisting in a want of proportion between the intensity of the stimulus and the strength of the reaction.

Russell Reynolds, Charcot, and Moebius all emphasised the importance of "ideas" in producing hysterical symptoms. Bernheim and Babinski find the keynote in "suggestion." Sollier maintains that there is a torpor of the brain, local or general. Dr. S. J. Sharkey looks on hysteria as a peculiar condition of the brain in which the current or nerve force is distributed in an irregular and fluctuating way, so that some centres are apt to be flooded, others left high and dry, the result being in the one case overaction, in the other paralysis.

Dr. Parkes Weber, regarding hysteria from the point of view of phylogenesis, suggests that it is a sort of secondary sexual character.

Most of these opinions, valuable as they are, have not been elaborated into precise theories, so as to explain in detail the wonderful variety of symptoms which meets us in this disease. Let us go on then to authors who aim at more detailed explanation of the facts.

PHYSIOLOGICAL VIEWS.

Dr. Charlton Bastian[2] studies hysteria from the point of view of anatomy and physiology. He thinks, however, that the term "hysterical" should not be applied to all nervous affections for which we cannot find an organic cause; there are some which we may justly term functional, but not hysterical. The class of cases which he would thus detach from hysteria is a limited but very important one—viz., paralyses, motor and sensory. One reason given for thus detaching them is that such paralyses may often be found in patients who exhibit no other symptoms—no fits, that is, nor mental peculiarities, such as proneness to exaggeration or caprice, which Bastian apparently considers to be most characteristic of hysteria. Further, whereas hysteria is generally considered to be a perversion of the highest cerebral functions, these paralyses can, in his view, be shown to depend on local affections of the nervous system, and that not only of the cerebral cortex, but also of the lower centres and of the afferent nerve fibres. I alluded in my first lecture to certain similarities between hysterical and organic paraplegia; these and other similarities between hysterical and organic paralysis are studied by Bastian in detail and in a most interesting series of cases. I must be very brief in considering these.

A young woman was unable to move her right arm. There was (at the time of observation) very little sensory loss, except that there was loss of muscular sense in that arm. There was no rigidity. She stated that she could imagine or picture to herself movements of the left (non-paralysed) arm, but could not imagine movements of the right. This type of monoplegia corresponds to the effects of a local lesion in the arm centre of the left Rolandic area—an area which, in Dr. Bastian's view, is not so much motor in function as kinæsthetic. Movements were no longer possible, because the memories of movements were annulled.

We may take other kinds of case. The hemianæsthesia so common in hysterical cases would be explained as a failure of function in the posterior part of the opposite internal capsule, and a paraplegia, unaccompanied by loss of sensation, but accompanied by rigidity, as a failure of function in the pyramidal tracts of the cord.

Consideration of So-called Functional Paralysis.

Any views enunciated by a physician of Dr. Bastian's experience, and enforced by the cogency of argument whereof he is a master, must deserve the greatest respect. Yet I cannot altogether bring myself to agree with him in separating these forms of so-called functional paralysis from hysteria. His arguments for so doing are mainly two. First, that the affection is a local one. But is this satisfactorily proved? Take the fairly common case of a hysterical hemiplegia, which is generally incomplete and non-spastic, but combined with a hemianæsthesia which is often very marked. On the localising hypothesis there must be two lesions, one in the Rolandic centre and another in the sensory part of the internal capsule. Does not the necessity for supposing two lesions indicate a weak spot in the localising hypothesis? Again, take the spastic cases, and particularly spastic paraplegia. We cannot thoroughly discuss these without reference to Babinski's sign (the extensor plantar reflex). The presence or absence of this is not mentioned by Bastian, for the very good reason that the sign was not known at the time when he wrote. Still, knowing, as we now do, that Babinski's sign is always absent in functional disease, we may assume that it would not have been found in Bastian's cases. Here, then, would be a contradiction; rigidity is present, and from its presence we are asked to infer an abnormal condition of the pyramidal tracts, but Babinski's sign, a far more delicate index of the condition of the pyramidal tracts, is absent. Take, again, the symptom of anæsthesia. If this symptom (as I endeavoured to show in my first lecture) is in a sense unreal—i.e., that many of these patients feel, though they do not know that they feel—surely this

[1] Lecture I. was published in THE LANCET of April 25th, 1914, p. 1163.
[2] Hysterical or Functional Paralysis. London, H. K. Lewis, 1903.

militates against the notion of a local lesion, even of a "functional" nature, in the afferent tracts. For how can nerve fibres be so damaged as to bar the transmission of conscious sensations and at the same time let the subconscious sensations through? Lastly, it appears that such paralyses, whether motor or sensory, have been made and unmade by hypnotic suggestion. It is difficult to suppose that such an action takes place in the conducting fibres or anywhere else than in the highest centres.

Dr. Bastian's other reason for refusing to call these forms of paralysis hysterical is that many such patients have no hysterical fits and exhibit no hysterical temperament. But others of them certainly do have fits, and what is more to the point, occasionally a paralysis of this kind appears as the direct sequel of a hysterical fit. About a patient's temperament it is often difficult to be sure without an intimate personal knowledge. Besides there are some patients whom with Charcot we must recognise as "*hystériques placides*." Lastly, in the history of these hysterical paralytics we often find the same sequence of events as in typical hysteria—namely, a neuropathic family history, disappointments, grief, anxiety, fright, ill-health, traumatisms, and (shall I say it?) surgical operations. So that I would still continue to class them as hysterical.

Pathogenesis of Functional Paralysis.

As to the pathogenesis of this functional paralysis, apart from the localisation of it, Dr. Bastian speaks with reserve. He considers (without entirely adopting it) the hypothesis of a vaso-motor spasm causing local defect of function. That hypothesis is naturally suggested by the sudden appearance and disappearance of the symptoms which we often witness. Against it stand the cases where the paralysis lasts for months or years. Another hypothesis is that of a local malnutrition of the affected nerve areas, primary and not dependent upon any change in the blood-supply, just sufficient to interfere with proper function, but not sufficient to produce structural disorganisation. But we do not know, I think, of any such kind of malnutrition; and moreover the sudden and unaccountable changes which sometimes occur in such cases are very difficult to explain on the basis of a malnutrition, whether from vaso-motor or other cause.

I give as an illustration of this curious changeability the following case of hysterical aphemia or mutism. It will be remembed that Dr. Bastian has pointed out that this particular symptom of mutism, as we see it in hysteria, is just what would be produced by a local lesion of the fibres leading downwards from Broca's convolution to the bulbar nuclei. My case is quoted by Dr. Kinnier Wilson in his article on Hysteria in *Brain* (Vol. XXXIII., p. 312).

A young woman, intelligent, quiet, apparently unexcitable, and anxious to get well, was admitted under my care at Queen-square for an incomplete hysterical hemiplegia. After some weeks she began to stammer. To stop this faradisation was applied. The result was unexpected, for she suddenly became unable to utter a word, as dumb as the son of Crœsus in Herodotus, or as the priest Zacharias in the Gospel of St. Luke. The sister of the ward invented a treatment of her own—namely, to manipulate the patient's tongue. One day, while this was being done, she recovered her speech. But such a speech! A loud, harsh, syllabic monotone, produced with a mouthing and an effort, which was most unpleasant both to hear and to see—"δεινὸν μὲν ὁρᾶν, δεινὸν δὲ κλύειν." It was so disagreeable, in fact, that for the sake of the other patients her hours of speech had to be curtailed; and finally, as it seemed necessary to do something, she was given an anæsthetic, together with the firm assurance that when she came round she would speak quite well. But again the unexpected happened, for when she came round she was completely dumb again, and in spite of all persuasion, whether in hypnosis or otherwise, dumb she remained up to the date of her discharge and for some weeks after. Then the final turn of the wheel came in the following curious way. She happened to find unexpectedly in a drawer a lost picture of her deceased father, concerning which she and the aunt with whom she lived had had frequent discussions as to whether the face looked to the right or to the left. On finding it she said suddenly, "Look, auntie, I was right," and soon afterwards she recovered her speech entirely.

Now I can hardly think that a local variation of blood supply, still less a local malnutrition of nerve fibres, was responsible for all these curious fluctuations in her speech.

Vaso-motor Hypothesis of Hysterical Symptoms.

The hypothesis of a vaso-motor spasm or vaso-motor paresis as a basis for hysterical symptoms, which Dr. Bastian only suggests, is adopted without reserve by Dr. T. D. Savill. This author considers:[3] 1. That "hysteria consists of an instability or undue irritability of all the nervous and reflex centres throughout the body, and particularly those of the vaso-motor and sympathetic systems." 2. That "hysterical paralysis or tremor and many other hysterical phenomena hitherto unexplained are produced by vascular changes in the nervous system and elsewhere." The only mental process that he admits is that emotion, as a determining factor, may set in action the irritable vaso-motor machinery. "Given inherently unstable nerve centres and cells throughout the nervous system, emotion starts vaso-motor changes and thus disturbs the blood supply and the nutrition of other unstable centres sufficiently to produce in them an abeyance or an irritation of their functions."

Savill lays great stress on certain vascular phenomena which may be witnessed in the skin, such as general or partial blanching and patches of transient congestion, which he affirms are very frequent in hysteria, and, indeed, characteristic of it. He argues that similar processes may take place in the central nervous system, and that local flushing or ischæmia of nerve centres thus caused may bring about hysterical paralyses or other symptoms. For myself I do not agree that the skin symptoms mentioned by Savill are in any way characteristic of hysteria; and I think that there is no independent evidence of the supposed vaso-motor affections of the nervous system, and that even if they existed they would furnish a very poor explanation of the phenomena of hysteria. Nevertheless, we shall do well to remember that the mental state which we call emotion has a close connexion with our bodily states, and especially with the state of our vaso-motor apparatus; and further, that in the opinion of several authors (as I mentioned at the beginning of this lecture) emotion is an essential factor in the production of hysteria.

PSYCHOLOGICAL VIEWS.

You will have seen that both of these English authors approach the problem of hysteria from the physical or physiological side. We will now consider the opinions of two distinguished French authorities (I must limit myself to two) who take the other point of view. In dealing with the French literature I must acknowledge my obligations to my friend, Dr. Kinnier Wilson, both for his excellent

[3] THE LANCET, 1907, vol. i., p. 1693.

article in *Brain* which I have just mentioned, and for other help.

THE VIEWS OF PROFESSOR BABINSKI.

Just as Dr. Bastian would curtail hysteria as viewed from the physical side, so would Professor Babinski curtail it as viewed from the psychical aspect.

Hysteria, according to Babinski,[4] is essentially a matter of suggestion. The symptoms arise in conformity with ideas that have been implanted in the patient's mind, and they can be removed by "persuasion," by which he appears to mean a counter-suggestion of a reasonable kind, calculated to restore the patient to a normal condition. The patient is not a malingerer, for she does not produce the symptoms consciously and of set purpose; nevertheless she does, unconsciously, produce them, and they are never of a kind which she could not produce voluntarily. There is simulation, but it is unconscious and involuntary simulation. How, then, does the patient come by the ideas to which the symptoms conform? And how does it come to pass that in so many patients we find, again and again, the same symptoms (i.e., the same ideas) recurring with such regularity that they have been called "stigmata"—that is, characteristic marks of a disease? Babinski's answer is that these stigmata are suggested by the physician as he examines the patient.

Suggestion as a Factor in Anæsthesia.

Say that a patient is being examined for hemianæsthesia; the touch first on one side of the body, and then on the other, accompanied by the question, "Do you feel that?" in each case is enough to make the patient suppose that she ought not to feel alike on the two sides of the body—and consequently she does not. And it is, as a fact, noteworthy that often before she was examined she did not know that she was hemianæsthetic. In his own practice, Babinski tells us, when the examination is so conducted that no such inference can be drawn from it by the patient, hysterical anæsthesia does not exist.

Now, I have no difficulty in believing that anæsthesia can be produced in this way; indeed, I remember a striking instance of it. There was a girl in Queen-square Hospital whose illness I had diagnosed as hysterical. My then clinical assistant was deeply interested in the study of the distribution of the sensory nerve roots. He told me one day, and demonstrated to me, that this patient was anæsthetic in the area of one of the cervical roots. This, I felt, was a blow to my diagnosis. Next week the anæsthesia had spread to the area of the adjacent nerve root. The following week, however, it had spread all over her body. So we settled down comfortably to the original diagnosis. The patient had somehow appropriated the anatomical knowledge of her examiner.

But that all, or even most, hysterical anæsthesia is produced by such suggestion I cannot admit. Other physicians are as careful as Babinski in their methods of examination, and yet they find anæsthesia in patients who have never been examined before. You will remember, Sir, the method described by Dr. Glynn in his Bradshaw lecture, in which no question is put to the patient at all. Sometimes, too, we find anæsthesia distributed in ways which we do not ourselves expect—for instance, in irregularly scattered patches. Lastly, it sometimes happens that the patient knows that she is anæsthetic before she comes to the physician. The following illustration of this is from Dr. Kinnier Wilson's paper; it is a case that I well remember, under the care of Dr. James Taylor at Queen-square Hospital. A woman, who had had exceptionally good health previously, developed hysterical symptoms after a fall. She discovered for herself before she came to the hospital and before she was examined by any doctor a numbness and loss of sensation on the right side. There was nothing in the manner of her fall to suggest to her an injury on this side, for she struck her back and her head and supposed that these were the parts injured.

I conclude, therefore, that suggestion by the physician is by no means the only way in which anæsthesia and the other stigmata are produced: I doubt, indeed, whether it is a usual way.

Other Symptoms and their Relation to Suggestion.

Then there are all sorts of other symptoms, which are evidently not suggested by the physician or friends, because they come as a complete surprise to them. These, we are told, may be the result of "auto-suggestion." Now, auto-suggestion is a word as convenient as "auto-intoxication," and about as unsatisfactory. The last part of it implies something coming from the outside; the first part "auto" implies that the preponderant factor is the working of the patient's own mind. Now this would take us back to the remembrance and to the mental elaboration of any previous experiences and any previous ideas—in short, to an explanation which may indeed be correct, but which comprehends far more than the "suggestion" with which we started.

There are further objections to making suggestibility the sole canon of hysteria. We all know people who are gullible enough who are not at all hysterical; and, on the other hand, many hysterical patients are not particularly open to persuasion, at any rate when you try to remove their symptoms that way, whether in hypnosis or out of it. And for the majority of them, granting the supposed susceptibility to suggestion, what causes this? It can hardly be a primary attribute of their minds; there must surely be something beyond it.

And what of such symptoms as œdema, congestion, hæmorrhage, and so-called trophic symptoms, which are so difficult to explain on any psychological theory? These at any rate are not such as the patient could produce by will, apart of course from self-mutilation. Some of them Babinski would class as secondary symptoms. Muscular atrophy, for instance, he considers to be secondary to disuse of the limb. With others he deals very summarily—namely, by denying their existence. They do not suit the theory and therefore they must go. This seems rather too drastic: Professor Babinski is, we know, a giant among neurologists, but he ought not to play the part of Procrustes.

THE VIEWS OF PROFESSOR JANET.

I must now turn to the views of Professor Pierre Janet. For the sake of brevity I am obliged to put them before you in a somewhat dogmatic form; but his method as I daresay you know, is not dogmatic or deductive, for his generalisations are built up on the results of close study of hysterical patients. Certain questions are involved here, of a psychological rather than a medical nature, such as the nature of our personal consciousness and of what is often called now subconsciousness.

[4] See principally Ma Conception de l'Hystérie et de l'Hypnotisme (Pithiatisme). Chartres. Imprimerie Durand. 1906.

On this subject Janet advances the following statements.

Consciousness and Subconsciousness.

From our earliest years our ideas—that is to say, mental phenomena or (more shortly) mental states of all kinds, whether they be sensations, volitions, memories, or emotions—have been grouping themselves together into a system in which they become bound together by innumerable ties of association. How or when this system originated we do not know, but the process of addition to it is always going on. Each time that a new mental state is brought into relation with this system we are aware of the fact, and this assimilation or synthesis of the new with the old constitutes a personal perception or act of consciousness.

But much goes on in our minds of which we are not conscious. An impression may be made on our bodily organs and the corresponding mental state arise, a memory may recur or an emotion stir within us, yet we may not realise the fact, because it has not reached the dominant system of our personal consciousness. Many instances will occur to you; thus of some things, such as the sensations from our internal viscera, we are hardly ever conscious, at least in health; other things may not reach our consciousness, because at the time it is busy with something else. In questioning a candidate for examination you might not hear the clock strike; in listening attentively to a lecture you might not notice how close the room was. Such trivial instances show at least that our consciousness has a limited range; it cannot take in an unlimited number of things at once, especially if one of them is particularly engrossing. Now the assumption may be made that this limitation of the range or "field" of consciousness differs in different individuals, that we have not all the same power of simultaneously taking into it a large number of mental states, and further, that in hysterical patients this power of synthesis is pre-eminently defective.

The importance of this last dictum will appear as we go on; meanwhile we may ask what happens to the mental states which never rise into the personal consciousness, but remain (as the phrase goes) subconscious. These too may combine into systems, separate from though analogous to the system of personality. The chance for such a combination to begin comes when our personal consciousness is at a low ebb, as may happen during the exhaustion of illness or anxiety, or during morbid reveries, or from the paralysing effect of a sudden emotion, such as terror, which has given us, so to speak, a knock-out blow; or perhaps because we are so constituted that our personal consciousness has naturally a feeble and noncomprehensive grasp—that is to say, because we are predisposed to hysteria. A vivid impression made upon us at such times becomes associated with other impressions of the moment and with appropriate memories of the past, and thus is originated an independent system of ideas withdrawn from our personal consciousness, a secondary consciousness. Under favourable circumstances this secondary system may grow until it interferes with the primary system or even threatens to usurp its place. The hysterical mind offers a favourable soil for such a growth, for the personal system cannot assimilate readily, and thus leaves the more material for parasitic systems to feed upon. The central government is weak and there results a turbulent home rule all round.

Varied Meanings given to Subconsciousness.

Perhaps I have gone too far in stating these things in the terms of a definite theory. I hasten to add that Professor Janet himself puts forward his views on subconscious phenomena less as a cut-and-dried explanation of facts than as a convenient way of summarising facts. In this he is certainly more moderate than others whose speculations on this subject have been inclined to run riot. For subconsciousness is fast becoming quite a popular word—most unfortunately, I think, for there is still much doubt what it ought to mean,[5] whether it means merely what Carpenter described as "unconscious cerebration," or whether the "subliminal consciousness" of Myers, a mental substratum possessed (as he thinks) not only by every man, but by all men in common, and indeed a part of the infinite mind, or whether the "unconscious" of Freud, that large dark chamber of our mind, the door of which is partly open at night to dreams, but mostly closed by day, until the psycho-analyst comes to call spirits from its vasty deep.

Again, the subconscious system of ideas, or secondary state of consciousness, has been elaborated into the conception of a dual, alternating personality like Dr. Jekyll and Mr. Hyde, or other more historical cases; or even multiple personalities, more than one of which may coexist in the same patient at the same time, as in the famous case of Miss Beauchamp described by Dr. Morton Prince[6]—I beg her pardon, I ought to say the Misses Beauchamp, for there were some four or five of her in the same body. Two of them had a simultaneous existence—namely, the original shy, prudish, neurotic Miss Beauchamp, and a certain rollicking girl called Sally, who knew all Miss Beauchamp's thoughts and doings, and chiefly employed herself in getting her into scrapes. Truly a remarkable psychological family, several people in one, including this oddly assorted pair of Siamese twins! To speculate on their personality makes one's head go round.

Mental "Stigmata."

But to return to hysteria. The fundamental defect, according to Janet, consists, it is true, in a feebleness of mental synthesis; yet this is a condition which has to be inferred and cannot be directly observed. But there are certain very common mental traits open to observation to which he gives the name of mental stigmata, adopting the term used by Charcot for certain common bodily symptoms. These I need only just mention, because I think you will not doubt their existence. Neither will I stop to show their connexions with the fundamental feebleness of synthesis; I will leave that to you. Now we may mention among such mental "stigmata":—

1. Suggestibility—not merely that an idea can be easily implanted in a patient's mind, but that it tends to develop there and engross the whole mind.

2. Distractibility. This is merely the obverse of suggestibility; while the patient is occupied with one idea she forgets all others.

3. Feebleness of will, so called "aboulia." Whatever "the will" means, it implies at the lowest estimate a weighing and comparison of many motives, which is just the sort of thing which the hysterical patient cannot do. Sir James Paget, I think, put it thus: It is not that the patient will not, but that she cannot will.

[5] See Subconscious Phenomena, by Münsterberg and others, Rebman, Limited.

[6] The Dissociation of a Personality.

§ 4. Changeability and waywardness, as of symptoms, so of disposition and desires—a trait that has been most unjustly transferred to the whole female sex. "Varium et mutabile semper Femina" was the excuse the gods gave to Aeneas—when he deserted Dido! though it would have been more honest to say with the drunken sailor in the *Tempest*—

> Then to sea, boys, and let her go hang.

Amnesia.

But there is one mental peculiarity on which we must dwell longer—namely,

5. Defective memory—amnesia. In accordance with Janet's fundamental hypothesis, we should expect that a person who cannot gather up into his consciousness many things at once would have a bad memory. Nevertheless, loss of memory in the ordinary sense of the term—namely, a general forgetfulness of all events extending over a given time in the past—is not, I think, very familiar to us as a symptom of hysteria. Possibly that may be because, like anæsthesia, the symptom requires to be looked for. Thus a girl under my care in St. Bartholomew's Hospital gave us a fair history of her illness, but on questioning her more closely concerning the onset it was found that she had totally forgotten all the events of a fortnight or so at that period of her life. She filled up this gap apparently with what she had been told. Her mother, to whom we referred, knew all about the girl's peculiar loss of memory, but had not thought it worth mentioning. So in this case the symptom was found out almost by accident. Similarly the sister in charge of my then female ward at St. Bartholomew's Hospital told me not long ago that when hysterical patients who had been in the ward came back to visit her after their discharge, being apparently well, many of them did not remember anything about their illness nor what had happened to them in the ward, or at most had hazy memories about it, "like a dream." But Janet gives much more striking instances of this kind of amnesia, where a piece of the patient's life is clean cut out of remembrance.

But in addition to this localised amnesia there is a loss of memory which may be called "systematised." The patient forgets everything connected with a particular person, or a particular event, or even a particular conception. It is a class of memories that disappears, not a series of events in time. This is less strange than it seems at first sight, for our normal memory is a faculty which is given to specialising. One man remembers people by their faces, another by their voices. I knew a gentleman who had a wonderful memory for histories, poetry, languages, derivations of words, and so forth, but if he took a hand at whist he could hardly remember a card that had been played. Now what the hysterical patient is most apt to forget are the things connected with the causation of her symptoms. Thus Mrs. A (already mentioned in my first lecture), when she came to me for a contracture of her fingers, gave me an account from which one would have supposed that the contracture came on spontaneously, until her husband said, "Why, you have forgotten to tell the doctor about the dog that bit your hand." And this brings us to a sort of amnesia which we should all admit to exist—namely, that after a severe hysterical fit the patient, when she has come completely round, forgets all the circumstances, physical and mental, of the fit itself. But in all these cases of hysterical amnesia there is a fact which must be emphasised—namely, that the memories are not annihilated, they are simply in abeyance, and under appropriate circumstances can revive. Thus, if the patient's fits be of the dramatic or somnambulistic type, the drama, or at least its *leit-motif*, recurs in each attack. Or perhaps under hypnotism or by means of automatic handwriting the patient may be made to reveal the lost memories. So we may put it in this way—the memories have disappeared from the system of personal consciousness, and the patient cannot call them up at will, but they remain in the subconsciousness, attached probably to some independent system of ideas, in connexion with which they can automatically reappear.

Fixed Ideas.

After saying that hysterical patients are apt to be forgetful, changeable, and irresolute, it seems almost a contradiction to say that they are dominated by fixed ideas. So far from being a contradiction, however, it is almost a corollary of what has been already said. In speaking of a fixed idea we generally, I think, refer to the obsession of a psychasthenic patient. This is something actually present to his consciousness. He knows too well the feeling that he may have committed some crime, the fear that he may be suffering from some disease, the impulse to injure himself or others. As a set off, indeed, to the unwelcome presence of this idea, he generally retains some control over it, so that it rarely becomes completely realised, either in thought so as to become a delusion, or in action so as to become a crime. But the fixed idea of the hysterical patient is altogether subconscious. It is part of, indeed the nucleus of, a secondary system of consciousness. Thus, being out of relation to the system of personal consciousness, ignored, uncontrolled, and uncorrected by the patient and by the realities of her daily life, it is all the more likely to become fixed and to develop abnormally, both in precision of detail and in overpowering effect. You and I, perhaps, with our humdrum lives and phlegmatic temperaments, hardly recognise the picturesque and realistic power of a vivid idea. Yet you remember how the widowed Lady Constance describes the loss of her only son—

> Grief fills the room up of my absent child,
> Lies in his bed, walks up and down with me,
> Puts on his pretty looks, repeats his words,
> Remembers me of all his gracious parts,
> Stuffs out his vacant garments with his form—
> Then have I reason to be fond of grief.

So long as the fixed idea remains buried in the subconsciousness it may give rise to no overt trouble; but should circumstances arise to weaken the grasp of the personal consciousness, so that it vacates its proper dominion, then the subconscious idea may assume command. The result is a hysterical fit—that is, a somnambulism, or second state of consciousness, in which the patient passes out of relation to her real conditions, into an imaginary set of conditions dictated by the fixed idea or reminiscence of the past. As we do not often see in this country perfect specimens of hysterical somnambulism, I will quote one from Janet's writings.[7]

A girl had been alone in lodgings with her mother; she had nursed her day and night and worked in the intervals for her daily bread. When the mother died the daughter

[7] Les Névroses, Paris, Flammarion, 1910.

tried to restore the respirations, but the only results of her efforts were that the body fell from the bed and she had the utmost difficulty in replacing it. The girl's fits began some time after the funeral. In the fit she went through the scene of her mother's death, partly in word, partly in action, with all the terrible details; and when that was over began preparations for her own suicide by throwing herself under a train. She stretched herself on the floor of the ward and lay there half frightened, half impatient, waiting for the train to come. At last it came; her eyes dilated with terror, she gave a loud shriek, and then lay motionless as if dead. This fit might be repeated more than once, but when it was well over she picked up the work she had been doing and went on with it, totally unconcerned with what she had been through, because, indeed, she was now totally ignorant of it.

In such a fit the sudden and complete development of the idea and the equally sudden and complete disappearance of it are in striking contrast with the persistent, conscious, but incompletely realised obsession of a psychasthenic patient.

Action of Subconscious Ideas.

But the subconscious fixed idea, without superseding the personal consciousness and without taking temporary control of the mind, may have other more permanent effects upon the patient. I have mentioned the theory that hysterical paralysis is due to an idea. This originally meant that the patient did not move because she thought she could not, or because some thought restrained her from moving. It was urged as an objection that patients denied the existence of any such thought. This difficulty disappears now, since we have learned that there are many thoughts in our minds of which we know nothing. In some cases the existence of such an unrecognised thought can be shown by the history, as when the paralysis can be traced back to some suggestive event, such as an injury, or a fright, or the sight of some stricken person, Or again, the symptom may follow directly upon a hysterical fit, so that we may suppose that some part of the idea, which was elaborated in the fit, survives when the fit has subsided. In the drama of suicide, just mentioned, if the imaginary train had gone over the patient's legs, it is quite likely that she might have remained paraplegic. In many cases, however, we can obtain no clue to the patient's fixed idea, unless we can make some direct appeal to the subconsciousness, by hypnotism or some similar means. But if you grant that a subconscious idea may act in the way described, then it is obvious that a large variety of hysterical symptoms may be explained in this way, not only paralyses, but also pains, spasmodic movements, and some peculiar contractures like those quoted in my first lecture.

There are other ways in which Janet's theories are adapted to the explanation of hysterical symptoms. Anæsthesia, for instance, can be referred at once to his fundamental conception of hysteria—namely, the inability to realise many ideas at the same time. Owing to this inability sensations, which may be at the same time unimportant for the patient to realise, are allowed to drop out of her personal consciousness, and fail again to find a place in it. We can understand the peculiarities of hysterical anæsthesia when we consider it from this point of view; how it is that the patient is unaware of her anæsthesia, how it is that she can still feel, though she does not recognise that she feels, and finally the distribution of the anæsthesia, which does not correspond to anatomy, but to the anatomical ideas of the man in the street about a hand or a wrist, an arm, or other parts. Though of course if a functional anæsthesia befell some member of my audience whose anatomical conceptions are correct, and who think in terms of Dr. Head's diagrams, its distribution might possibly be different.

Hemianæsthesia, limited by the middle line, has always seemed to me a little curious regarded in this light. I suppose Janet's explanation is that we think of ourselves as made up of two halves, right and left. I wonder if we really do. An observation by Dr. Foster Kennedy, quoted by Dr. Kinnier Wilson,[6] seems to point that way. Dr. Kennedy, while going his rounds as house physician at Queen-square Hospital, found a woman who had hysterical hemianæsthesia of the left side, with her right arm so placed that her right (sound) hand was well to the left side of her body. It occurred to him to test the sensation of the right hand while it was in this position, and he found it was anæsthetic, which it had not been before.

The Psychological Representation of a Function.

Anæsthesia has been advanced as an explanation of diverse other hysterical symptoms—for instance, it has been said that retention of urine is due to anæsthesia of the bladder, and anorexia nervosa to anæsthesia of the stomach. But of many things of this kind Janet takes a much more general view which is based on his idea of that which we roughly call a function. This idea I must try to put before you, in concluding this lecture.

I suppose that by "function" we generally mean a combination of bodily events, so that they work harmoniously together towards some given physiological end. In some of these combinations the organisation is complete and fixed almost from our birth, like that of the circulation, over which we have little, if any, personal control. Over others, like that of micturition, a certain amount of control is still exercised. In others, like that of walking, we can watch the gradual change from conscious effort to something like automatism. It is worth noting, however, that even when practice has made a function perfect, it is still liable to be upset by unusual mental conditions. A person who can walk without thinking along a country road, or even saunter through the traffic of a big thoroughfare, might be unable to walk in a State procession down the nave of Westminster Abbey, because, as we say, he is "nervous."

The combinations necessary for the performance of a function are made in the central nervous system, and in the case of the lower, most completely organised, functions we know the groups of cells and fibres, the so-called centres, which chiefly preside over the function. We know something of the anatomy of even such a high function as that of speech, and we imagine that similarly for the very highest functions there must be some anatomical arrangements in course of formation, though we must own we do not know. Now Janet holds that for the due performance of a function an organisation, comparable to this bodily organisation, must have been made in the mind. Just as simple sensations and memories are built up to form the idea of an object or of a movement, so a far more complicated system of ideas and memories is built up to form the psychological representation of a function.

[6] Brain, vol. xxxiii., pp. 334, 345.

Perhaps you will think this rather too transcendental, and will find in it only the desire to escape, as many desire to escape, from the thraldom of our vile body, as in the Ideas of Plato, and the bodies celestial of the Apostle Paul. But no denial is made of physical organisation within the brain; it is merely asserted that in the present state of our knowledge it is more profitable to study the psychological aspect.

Exercise of Function in the Hysterical.

Let us assume that combinations or systems of ideas exist in our minds, which represent functions. These in the normal mind must be in touch with and under the control of that large system of ideas which we have called our personal consciousness. But in the hysterical mind this is evidently just the proviso that may fail, because the unifying personal element is feeble. The bodily conditions necessary for the exercise of a function may be perfect, the psychological organisation, also necessary for it, may exist, but this latter may have dropped away from the personal consciousness. Two possibilities may then arise: either the patient may be utterly unable to exercise the function voluntarily and consciously, or else the function may exercise itself automatically and without control. I will take but one illustration—namely, the function of speech.

1. "Functional paralysis" of speech, in an incomplete form, is seen in hysterical aphonia, hysterical stammering, and possibly in other varieties of speech affection. In a complete form it is seen in hysterical mutism or dumbness. Yet in such cases the organisations necessary for speech, whether bodily or mental, must be intact, for the patient may find her voice under the surprise of an electric shock or perhaps will talk in her sleep, and in any case we know full well that some day she will speak quite well.

2. The other condition—viz., uncontrollable speech—is not, I must own, very familiar to me. But Janet has seen many examples of what he calls hysterical logorrhœa, in which the patient pours forth, for hours together, floods of conversation, generally of a disconnected kind and forgotten as soon as uttered. The only illustration I could myself give was not a case of pure hysteria, for the lady who was the subject of it became insane. All her friends knew that an attack was coming on when once she began to talk; soon the talking became incessant, and delusions became intermingled with it. One delusion was that she was the recording angel, and the things that she recorded, in a loud voice, were extremely embarrassing to many of her friends.

Now, whether you grant the existence of psychological equivalents of functions, or whether you think the conception too vague and elastic, still you will admit that such an idea may help to give some definiteness to our notion of a "functional disease" which hitherto has been based simply on negative characteristics.

I hope, Sir, that I have not wearied you out with this discussion on theories, and I hope that in trying to put them into the compass of one lecture I may not have seriously obscured the authors' meaning.

In the next lecture I propose to consider Professor Freud's doctrines about hysteria, and since that will involve the discussion of certain disagreeable topics I must ask you your pardon in advance.

THE DIAGNOSIS OF POST-PYLORIC (DUODENAL) ULCER

BY MEANS OF SERIAL RADIOGRAPHY.

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IN previous communications[1] evidence has been assembled to show that the portion of the gastro-intestinal tract, previously called the first or ascending portion of the duodenum, pars superior horizontalis, or "bulbus duodeni," is not part of the duodenum, but really belongs to the stomach, and the name "pilleus ventriculi" (cap of the stomach) has been applied to it. Therefore the term post-pyloric ulcer, or ulcer of the cap, should be substituted for "duodenal ulcer," and will be used herein except in quotations. The diagnosis of post-pyloric ulcer and its differentiation from and relation to malignant and non-malignant lesions of the stomach form one of the firing lines of surgical advance. The importance of this field of work is evidenced by the communications of Wier, Moynihan, Codman, Mayo, and others, who have adequately described the clinical and surgical aspects of the subject.

Considering the part that radiology has played in medical and surgical diagnosis, it is appropriate that serial radiography should be an active scout in the detection of ulcers of the cap. Communications having a direct or indirect bearing on the radiographic diagnosis of gastric and duodenal ulcers have been published by Hemmeter, Holzknecht, Schwartz, Ashbury, Haudek, Strauss, Kreuzfuch, and Pfahler. Two diagnostic methods have been employed. One is based on symptom-complices, or groups of clinical manifestations, some of which are recognised by fluoroscopy or radiography. But they are symptoms only, as the name suggests, and not direct evidence of the lesion. The other method depends on the contention that bismuth will adhere to the surface of an ulcer or lodge in its crater. Failure to differentiate such flecks from retention in the normal cap is the weak point in this theory. Haudek's "niche" is a finding of undoubted significance. But it very frequently occurs in extensive inoperable carcinoma of the lesser curvature, and furthermore must be carefully differentiated from a small deposit in a pouch of the œsophagus near the cardia.

Strauss's excellent article on duodenal ulcer[2] covers many of my observations, some of which have been published, but certain of his deductions do not correspond with my interpretation of the phenomena presented.[3] He bases the diagnosis of ulcer on a rather elaborate symptom-complex which he has compiled. Strauss's remark that roentgen-kinematography may sometimes prove of great diagnostic assistance brings me to the crux of my communication.

The technique of serial radiography, and especially the relative value of serial radiography and roentgen-kinematography, have been fully explained heretofore. The gist of it is that 24 instantaneous

[1] Archives of the Roentgen Ray, April, 1912, No. 141, p. 427; Journal of the American Medical Association, Nov. 30th, 1912, vol. lix., p. 1947; and 1913 Meeting of the American Medical Association, Minneapolis.

[2] Fort. a. d. Geb. Roentgenstrahlen, 1913, Band xix., H. 6, S. 461.

[3] Archives of the Roentgen Ray, October, 1912, No. 147, p. 172; Journal of the American Medical Association, Nov. 30th, 1912, vol. lix., pp. 1947-51.

radiographs of different phases of different cycles, made in rapid succession, are of more diagnostic value than 24 radiographs of different phases of one

FIG. 1.

Normal cap and sphincter. A, Cap. B, Indentation of cap by descending duodenum. C, Descending duodenum. D, Pyloric sphincter. E, Terminal wave.

cycle. Technique aside, we pass at once to a description of the anatomy and physiology of the pars pylorica, pyloric sphincter, and pilleus ventriculi as observed by means of serial radiography. This subject was fully discussed before the American Medical Association in a paper which is now at press.[4]

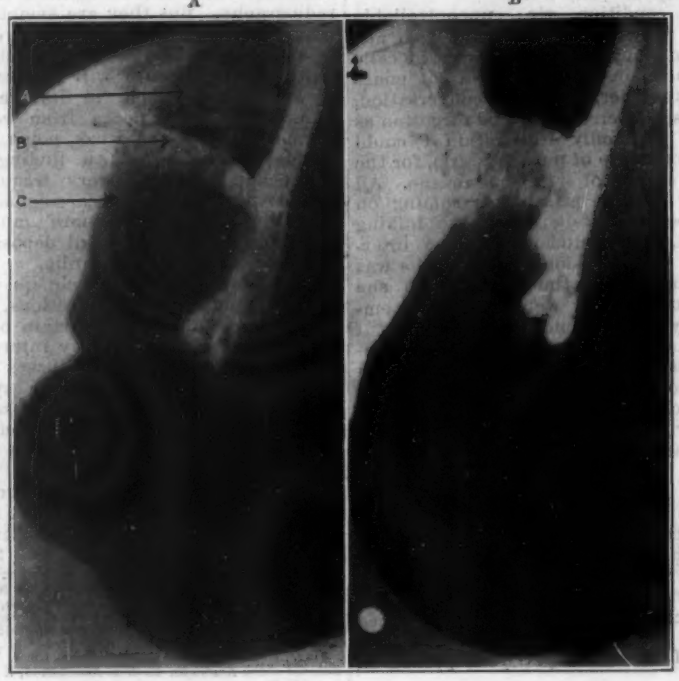
The progression of the gastric peristalsis observed by Cannon in the cat[5] was demonstrated in man by Kaestle, Rieder, and Rosenthal.[6] While the progress of the peristalsis may be seen in nearly all cases, the speaker recognised and has previously described a much more complicated gastric motor phenomenon, which, like the heart action, takes place in cycles, marked by a systole and diastole, or a contraction and relaxation of all the peristaltic waves simultaneously. A cycle exists during the time occupied by the formation of each terminal wave or antrum. During the stage of systole (Fig. 3A), which consumes about seven-tenths of the gastric cycle,

FIG. 2.

Normal cap. A, Cap. B, Sphincter. C, Lumen of sphincter. D, Congenital fold. E, Terminal wave.

chyme is expelled through the lumen of the pyloric sphincter into the pilleus ventriculi. The remaining three-tenths of the cycle are consumed by diastole (Fig. 3B) when the pyloric sphincter closes and prevents the chyme in the cap from dropping back into the stomach. Sometimes the chyme in the stomach drops away from the pyloric sphincter.

FIG. 3.



A, Systole. B, Diastole.
A, Cap. B, Sphincter. C, Terminal wave.

The Physiology of the Pylorus, Pilleum Ventriculi, and Duodenum was discussed in a paper before the American Medical Association, June, 1913.[7] There is no evidence of a periodical opening and closing of the pyloric sphincter independent of the gastric cycle.

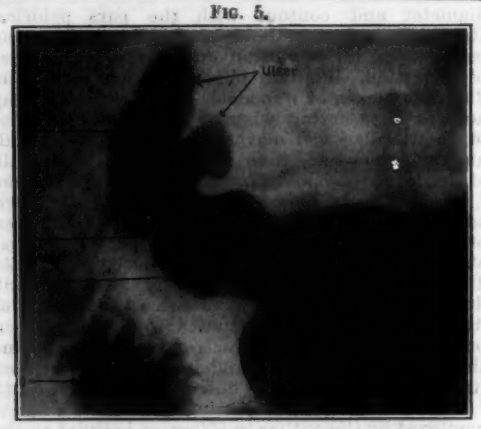
The radiographic evidence that all the characteristics of the cap are gastric rather than duodenal is corroborated by embryology, anatomy, physiology, histology, and surgery. The cap (Figs. 1, 2, 3A and B) corresponds in

[4] 1913 Meeting of the American Medical Association, Minneapolis.
[5] Wisconsin Medical Journal, No. 5, October, 1908.
[6] Archives of the Roentgen Ray, No. 119, June, 1910.
[7] Journal of the American Medical Association, Sept. 6th, 1913.

FIG. 4.

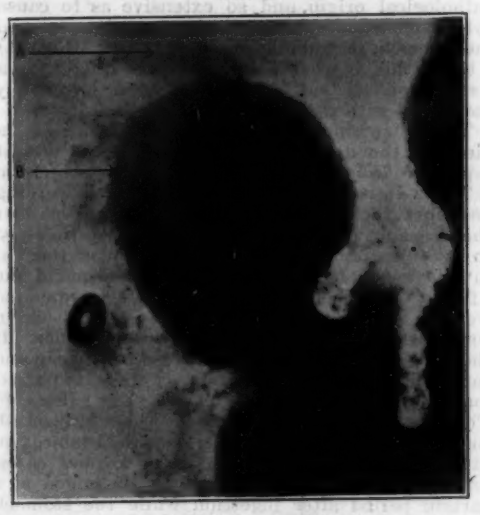
Post-pyloric (duodenal) ulcer. A, Induration from ulcer. B, "Pouch." C, Sphincter. D, Terminal wave.

FIG. 5.



Ulcer of cap (duodenal). A, Cap. B, Sphincter. C, Terminal wave. D, Descending duodenum.

FIG. 6.

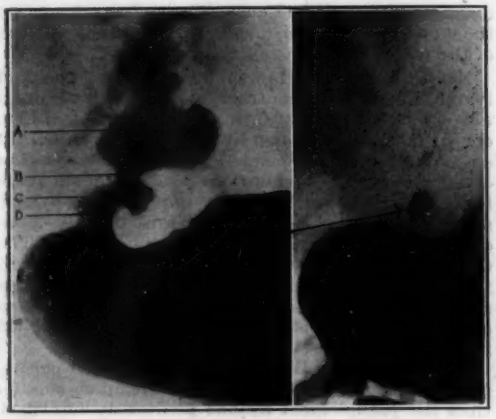


Complete destruction of cap shown at A. B, Terminal wave (antrum).

FIG. 7.

Old ulcer with cicatricial contraction of cap. A, Uninvolved part of cap.

FIG. 8.



Profile of ulcer. A, Cap. B, Everted edges of ulcer. C, Crater of ulcer. D, Everted edge of ulcer. E, Fleck of bismuth in crater of ulcer.

FIG. 9.

Ulcer on anterior wall of cap seen "full face." A, Deformed cap. B, Crater of ulcer.

diameter and contour with the pars pylorica. Its dimensions, like those of the stomach, depend partly upon its distension during different stages of digestion, different phases of the cycle, and different stages of duodenal peristalsis. The cap acts as a reservoir, where the finishing touches of gastric digestion may be applied to the small amount of chyme, thus isolated from the bulk of food in the stomach. A space varying from ⅛ inch to ¼ inch, indicating the pyloric sphincter, separates the cap from the stomach. The lumen of the sphincter is centrally located, and at first about ⅛ inch in diameter during systole. As digestion proceeds, it gradually relaxes until, during the later stages, it is twice as large as at first. The cap is evacuated by a periodical propulsive peristalsis, which propels the chyme through the descending and horizontal duodenum (in the finger-like masses described by Holzknecht).

The method of diagnosing post-pyloric ulcer employed by the author in 500 cases is based on the recognition by means of serial radiography of a constant deformity of the cap or sphincter, caused by the induration or cicatricial contraction surrounding the crater of an ulcer, or resulting therefrom. These findings are of extraordinary value if the radiographs of a large series are studied individually and collectively, and matched over each other or reproduced kinematographically. On the other hand, attempts to apply these diagnostic points to a study of two or three or even a dozen radiographs will only lead to errors and thus reflect discredit on the method. To illustrate the detail necessary for diagnosis, a slide of one characteristic radiograph of each series will be shown. A few series have been reproduced kinematographically to demonstrate the permanency of such deformity of the cap and sphincter.

The induration of an ulcer projects into the lumen of the cap, causing a displacement of bismuth as constant as one's finger-prints in a ball of putty. (Fig. 4.) It may be so small as to present only a constant dent on side of the cap (Fig. 5), or it may be so extensive as to distort the lumen of the cap beyond recognition. The process may involve one-half of the cap without distorting the other half. (Fig. 7.) In such a case the entrance of the lumen of the pyloric sphincter is an important guide in determining the centre of the cap.

In some instances the ulcer is viewed in profile, so that one sees its indurated edges projecting into the intestinal lumen and its crater filled with bismuth. (Fig. 8.) Retention in this "bullet-hole" pocket may be differentiated from the pouching to be described later, and from a normal accumulation in the cap. In another location the bullet-hole crater may be observed "full face" through the distorted and contracted cap. (Fig. 9).

Moynihan states that the ulcer may be separated from the pylorus "by a healthy margin of bowel."[8] (Fig. 5.) When this occurs the pyloric sphincter has the normal appearance previously described, and the small margin of healthy bowel is distinctly visible in some of the radiographs. In other cases where the ulcer is "just to one side of the pyloric ring, and may involve it" (Codman[9]) (Fig. 10), one side of the pylorus is the width of the indurated ulcer, plus the thickness of the sphincter, while the other side has a perfectly normal appearance. The induration may be sufficient to cause an obstruction and dilatation of the stomach; but when the ulcer heals after a gastro-enterostomy the induration subsides, and the chyme renews its passage through the duodenum. Where "the cicatricial contraction results in a formidable narrowing of the lumen of the gut" (Moynihan) (Fig. 11), it is doubtful if the course through the duodenum would be re-established after a gastro-enterostomy.

The puckering from the cicatricial contraction may cause a deformity equally as great as the induration. (Fig. 11.) Indeed, it is doubtful if one can determine radiographically whether the deformity is due to induration or adhesions, or which predominates. Frequently one observes, in addition to the deformity of the cap, a band of adhesions passing over on the gastric side of the sphincter, distorting the contour of the extreme pyloric end of the stomach. (Fig. 12.) This manifests itself most frequently by a fold on the lesser curvature about half an inch from the sphincter. I have observed this fold in all degrees, sometimes as a slight crease, which I interpreted as a congenital lack of expansion of the gastric wall at this point (Fig. 2), caused by the attachment of the gastro-hepatic ligament; at other times it is of pathological origin, and so extensive as to cause pyloric obstruction. This gives a peculiar form to the stomach, resembling an early fœtus. (Fig. 13.) I think this is what some observers refer to as a "snail-stomach," although that term is usually associated with gastric malignancy.

The "pouching," described by Moynihan as "a piece of the duodenal wall, which seems almost separated from the rest, being pinched away from it" (Fig. 4), is most interesting. Even his wording describes the radiographic findings in a manner that I cannot improve upon. I have always referred to it radiographically as a distension of the uninvolved portion of the cap. Possibly some of the "flecks" of bismuth which Kreuzfuch supposed were in the craters of ulcers may have been in some instances accumulations in these pouches. If the pouch is on the under surface of the cap and rather large its bismuth shadow is likely to persist longer than that of the normal cap. (Fig. 14.) Therefore the continued presence here of bismuth for an extended period is an additional indication of duodenal adhesions. In many normal cases, however, the cap is filled or even distended at a certain period after ingestion while the stomach is empty. (Fig. 15.) Failure to recognise and differentiate this phenomenon from pouching or a "bullet-hole" crater has led to many erroneous diagnoses of pre- and post-pyloric ulcers, based on the contention that bismuth adheres to the surface of the ulcer.

Narrowing of the lumen by massive deposits of lymph, or by firm contractions of the scar of an ulcer which has healed, described by Moynihan, could certainly be shown by serial radiography. In some cases this is associated with rapid evacuation of the stomach, but when this reaches such a stage that the lumen is less than that of the pyloric sphincter, gastric retention begins, usually associated with active peristalsis. (Fig. 16.) The degree of gastric retention requiring surgical interference is an open question. Holzknecht considers a six-hour retention abnormal, while Moynihan defines a 12-hour stasis as indicative of surgical intervention.

Many series of radiographs show constant permanent irregularities of the cap that are much smaller than the pathological lesions previously described. (Fig. 17.) These radiographic findings correspond with Codman's pathological description of healed

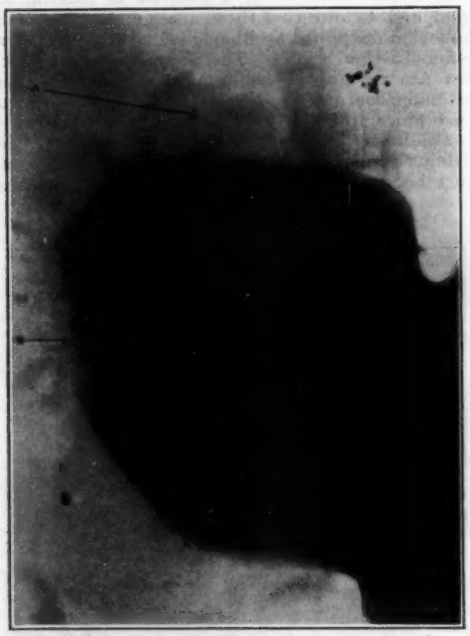
[8] Duodenal Ulcer, 1912, Moynihan.

[9] On the Importance of Distinguishing Simple Round Ulcers of the Duodenum from those Ulcers which Involve the Pylorus or are Above It (1909).

FIG. 10.

Ulcer of sphincter without pyloric obstruction. A, Cap. B, Ulcer. C, Terminal wave (antrum).

FIG. 11.



Ulcer of the cap with pyloric obstruction and prognathian dilatation. A, Complete destruction of cap. B, Prognathian dilatation from pyloric obstruction.

FIG. 12.

Ulcer of cap with adhesions to lesser curvature of stomach. A, Ulcer. B, Adhesions.

FIG. 13.

Pathological fold (A) on lesser curvature near pylorus, caused by adhesions.

FIG. 14.

Six hour retention in normal cap. A, Cap. B, Sphincter.

FIG. 15.

Six hour retention in pouch.

ulcer, in which a localised area of the muscular coat has been destroyed and replaced by non-elastic connective tissue. Codman acknowledges that such areas are difficult to detect at operation or necropsy, even when a surgeon is looking for them, and I think that these areas correspond with the lesion described by Bloodgood as non-ulcerative lesions in this region. The frequency with which they are recognised radiographically corroborates Codman's contention that ulcers of the cap occur much more frequently than one suspects. And it also indicates the frequency with which ulcers heal without surgical interference. The clinical history must be considered in determining whether these

FIG. 16.

Ulcer with cicatricial contraction and pyloric obstruction. A, Destruction of cap. B, Terminal wave.

slight, constant deformities are sufficiently extensive to require surgical interference or even to be observed surgically, especially if the surgeon is adverse to the diagnosis of post-pyloric ulcer, and is looking for an appendix, Lane's kink, or something else.

A spasm of the cap, associated with appendicitis, Lane's kink, renal calculi or gall-stones, resembles the distortion from post-pyloric ulcer, except that the spasm varies in appearance, and is absent in one or more of the 40 or 50 radiographs of the series. It can usually be completely relieved by administering belladonna before the confirmatory examination, with the result that a normal cap and sphincter presents. Such functional disturbances must be carefully differentiated from organic lesions of the cap. If one radiograph out of 50 shows a perfectly symmetrical cap, and a normal pyloric sphincter, a negative diagnosis of post-pyloric ulcer is justified.

A positive differentiation between post-pyloric ulcer and adhesions of the cap from gall-bladder infection cannot always be made exclusively from the radiographic findings. Gall-bladder infection usually presents a more extensive involvement of the pylorus and cap. It may involve the greater curvature and draw the stomach to the right, causing an angulation of the cap. The cap may be involved in the adhesions, but not more so than the pyloric end of the stomach, and there is no evidence of a localised area of induration of the cap, nor is obstruction of its lumen so frequent. This differential diagnosis between post-pyloric ulcer and gall-bladder infection is of more scientific interest than practical value, because in either of these conditions surgery is indicated, if the lesion is sufficiently extensive and associated with symptoms.

Adhesions from post-pyloric ulcer may involve other organs, the hepatic flexure of the colon, the stomach or the duodeno-jejunal junction, where the lower end of the C-shaped duodenum lies in close proximity to the cap. Sometimes the symptoms of adhesions of the colon are more marked than those of the ulcer itself, and lead to a radiographic examination of the colon rather than of the stomach. It is therefore wise in all cases of adhesions of the hepatic flexure and first portion of the transverse colon to make a radiographic examination of the stomach and duodenum. When adhesions from an ulcer of the cap involve and obstruct the lower end of the C-shaped duodenum, there is an unusual dilatation of the descending and horizontal portions, causing the sausage-shaped duodenum, referred to by Holzknecht. This sausage-shaped appearance is not necessarily an indication of ulcer of the cap, as it is more likely to present in cases of chronic obstruction of the duodenum by the root of the mesentery, a condition described by Codman. The

FIG. 17.

Small ulcer of sphincter. A, Cap. B, Sphincter. C, Small ulcer.

same obstruction at the duodeno-jejunal junction may also be caused by ulcers on the posterior wall of the stomach.

By the use of serial radiography, previously described by the present author, George (Boston) has been able to diagnose post-pyloric ulcers with a degree of certainty equal to that of the work herein reported. The procedure may seem very elaborate and therefore expensive, but considering the obscurity of these lesions, and the fact that the negative or positive diagnosis of post-pyloric ulcer by serial radiography is equally as accurate as the radiographic diagnosis of renal or ureteral calculus, one is justified in expending an unlimited amount of energy in detecting this lesion and differentiating it from other lesions.

This article has dealt solely with the *method* of diagnosing post-pyloric ulcer, and with one or two exceptions all of the cases illustrated have been proven by surgical procedure. Lack of space has necessitated the omission of many other proven cases of equal interest.

New York.

ACUTE LOBAR COLLAPSE OF THE LUNG.

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THE following case has recently been under our observation at Poplar Hospital.

The patient, a man aged 29 years, was admitted on Feb. 4th, 1914. He was quite well until two days previously, when he had suddenly felt a pain in the right side of the chest. This was followed by cough, sweating, vomiting, and several shivering fits. These symptoms continued until Feb. 4th, when he was seen by a medical practitioner for the first time and sent to hospital. His previous health had been perfect.

On admission the patient complained of pain in the right side, especially over the sixth and seventh ribs in the axillary line. His face was slightly cyanosed and the alæ nasi were working. There was a frequent restrained cough. The temperature was 103° F., the pulse was 104, and the respirations were 40. The sputum was scanty, thin, and contained no blood. On examination on the right side the movement of the thorax was seen to be very slight. The percussion note was impaired. The air entry was poor and the breath sounds were faint. No tubular breathing was heard. A few fine crepitations were present at the site of the pain but not elsewhere. The vocal resonance was increased but not altered in character. The cardiac dulness was entirely to the right of the mid-sternal line. The apex beat was not visible or palpable. The heart sounds were audible only in the epigastrium. On the left side of the chest the air entry was increased, but otherwise the lung was normal. The liver and spleen were not palpable. The temperature fell gradually and the pulse became slower, but the respirations remained rapid.

When seen on Feb. 11th the temperature was normal, but the respiration was very rapid. Cough was infrequent. Pain was slight, and there was no superficial tenderness. There was slight cyanosis. The sputum was very scanty and contained no blood. No tubercle bacilli were found in the sputum. The right side of the thorax moved very slightly, except at the apex. The percussion note was definitely impaired, but not absolutely dull. The note was resonant to the left of the right border of the sternum. The air entry was very slight, and the breath sounds very faint, except at the apex. No tubular breathing and no crepitations or friction sounds were present. There was no whispering pectoriloquy or ægophony, but the vocal resonance and tactile fremitus were both increased on the right side. The cardiac dulness could be definitely recognised and separated from the right lung. At the level of the fourth rib it extended from the mid-sternal line to 3 inches to the right. The apex beat was not palpable, and the heart sounds were audible only in the epigastrium. In the mid-axillary line the liver dulness reached to the upper border of the fifth rib. On the left side the breath sounds were loud, but otherwise normal. There were no signs of pneumothorax. Traube's area of stomach resonance was somewhat large. On measurement the two halves of the thorax were both 18½ inches at the end of expiration. These measurements were the same on all subsequent occasions. The intercostal spaces on the right side showed no abnormality. The abdominal movements on the right side were diminished; otherwise there was nothing abnormal to be found in the abdomen. The nervous system was normal and there was no sign of paralysis. There was no clubbing of the fingers. No glands were palpable.

From that time the patient gradually improved. The respiration became slower, and the abnormal physical signs gradually disappeared. The percussion note on the right side became more resonant, while the vocal resonance and tactile vocal fremitus diminished, and the respiratory movements became greater. No moist sounds were heard. The sputum, always scanty, became less and soon disappeared. The heart meanwhile moved towards its normal position. The following table gives the measurements of the cardiac dulness from the mid-sternal line at various dates:—

	Right.	Left.
Feb. 11th	3 inches.	0
,, 18th	1½ ,, ...	1¼ inches.
,, 24th	1½ ,, ...	1¼ ,,
March 7th	1½ ,, ...	2 ,,
,, 14th	1½ ,, ...	2½ ,,
,, 21st	Right border of sternum	3½ ,,

The pulse was regular throughout and no cardiac murmurs were present. The heart sounds gradually became audible over the area of cardiac dulness. The apex beat was just palpable when the patient left hospital. He felt perfectly well at the beginning of March, but the pulse and respiration remained more rapid than normal, and on his discharge were 80 and 24 respectively. In the lungs the abnormality which persisted longest was the increased vocal resonance on the right side. The physical signs were normal on March 21st.

The patient was radiographed on March 18th at the London Hospital by Dr. S. Gilbert Scott, who reported that the diaphragm was moving well, the heart being normal in size and position, the aorta normal and the apices of the lungs clear, and that no enlarged glands were present. The patient was discharged on March 23rd.

Diagnosis.—In view of the position of the heart and the physical signs in the lungs, the diagnosis of the pulmonary condition lay between fibroid lung and acute lobar collapse. The measurements of the two sides and the absence of previous ill-health excluded the presence of a fibroid lung, and the diagnosis of acute lobar collapse was made.

Apart from pneumothorax, acute lobar collapse may be considered to follow two conditions: (1) blockage of the air passages, and (2) inhibition or paralysis of the muscles of respiration.

Blockage of the air passages may result from various causes, such as a foreign body, plastic bronchitis, plugs of mucus, and pressure from neoplasms and aneurysms. The patient denied the possibility of a foreign body. There was nothing to suggest neoplasm or aneurysm. The physical signs did not point to the presence of bronchitis. No plugs of fibrin were coughed up as in plastic bronchitis.

With regard to inaction of the muscles of respiration, paralysis of the diaphragm may result from various conditions of the nervous system, such as diphtheritic neuritis or myasthenia gravis. Paralysis of the diaphragm would not account for the present case, since when the diaphragm is paralysed without the other muscles of respiration the lower ribs expand more than normally during respiration. The cause for this is referred to below. In the present case the ribs and the abdomen in the neighbourhood moved less than on the sound side. It appeared that the muscles of respiration had been reflexly inhibited. There was no abdominal cause to lead to this, and the apex of the lung was less affected than the base. The diagnosis was therefore made that as the result of pleurisy at the right base the muscles of respiration on that side had been inhibited, and this had been followed by acute lobar collapse of the lung.

The Occurrence of Acute Lobar Collapse.

Any foreign body which occupies space within the thorax must cause a certain degree of collapse of the lung. Such foreign bodies may be a pleural effusion, a pneumothorax, a neoplasm, or a gross enlargement of the heart, aorta, or pericardium. Of these, pneumothorax alone can cause sudden collapse, and must of necessity do so. Lobular collapse occurs in broncho-pneumonia, and may be extensive when the cause is widespread. Apart from these circumstances, a true acute lobar

collapse apparently can only result from the following causes: (1) blockage of air passages, and (2) inaction of muscles of respiration—(*a*) paralytic, and (*b*) inhibitory. Any condition, such as acute pleurisy, in which pain results from the act of respiration may result in a reflex inhibition of the muscles of respiration on the affected side. Dr. W. Pasteur has studied the occurrence of post-operative collapse, and has published the results of his observations in several able articles.

Nearly all recorded cases of collapse associated with inhibition of the muscles of respiration have followed abdominal operations. The reflex results in rest to the affected part and applies to the muscles of respiration in general. Diphtheritic paralysis may affect the diaphragm alone. It has been noticed that when the diaphragm is paralysed on one side the lower ribs during inspiration move more than on the sound side. Normally during inspiration the contraction of the diaphragm must exert a force checking the outward movement of the ribs, and the absence of this force in paralysis of the diaphragm must result in the ribs on the affected side expanding more than on the healthy side. In cases of inhibition the muscles are in a condition of spasm, which involves the intercostals as well as the diaphragm. In the case recorded above the intercostal spaces were not retracted nor did the lower ribs move during respiration. It is possible that, following operations, some cases where the collapse is partial are diagnosed as hypostatic pneumonia or pulmonary embolus. Slight increase to the right of the area of cardiac dulness would be difficult to distinguish from dilatation of the heart. In pulmonary embolism air enters the lung freely, while in collapse the air entry is diminished.

In most cases in which lobar collapse of the lung and inaction of the respiratory muscles are present it is possible to argue that the collapse is secondary to blockage of the air passages. On this view the inaction or comparative inaction of the muscles of respiration is the result of the collapse. Now it is known that lungs removed post mortem do not collapse to the extent seen during life in an artificial pneumothorax. The reason is that during collapse the walls of the bronchioles become approximated first and thus close the lumen and imprison the air in the alveoli. In life this air is removed by the blood and collapse becomes complete. Thus during life obstruction of the lumen of the bronchioles will lead to collapse. Therefore the presence of any cause which can obstruct the lumen may result in collapse. Viscid sputum may be such a cause and certainly does result in localised collapse where capillary bronchitis is present. Theoretically a widespread bronchitis could produce lobar collapse. Nor does there appear to be any reason to deny that this does in fact occur. It is possible that, in cases of post-operative lobar collapse where bronchitis is present, the collapse is due to blockage of the lumen of the bronchioles and that the inaction of the muscles of respiration is the result of the collapse. In such an event the inaction would affect not only the diaphragm but also the intercostals and certain abdominal muscles, and the lower ribs would not show the increased movements present in paralysis of the diaphragm.

It does not appear possible that lobar pneumonia can result in acute lobar collapse. The process affects the alveoli primarily and the solid lung evidently cannot collapse. Broncho-pneumonia may, as is well known, result in patches of collapse, but it is difficult to believe that the volume of the lung would appreciably diminish. A confluent broncho-pneumonia would resemble a lobar pneumonia.

It appears, therefore, that bronchitis is the only pulmonary condition which can lead to acute lobar collapse. Certainly, in the case which we have described there is no evidence that there was lobar pneumonia, nor for the reasons given above can lobar or lobular pneumonia explain the fact that a great diminution in the volume of the lung was present when the first observation was made on the third day of the disease. Nor do the physical signs point to the presence of bronchitis. When first admitted a few crepitations, which may have been pleural, were audible at the base, but none were present subsequently, even on deep inspiration. To account for this the collapse would have to be equal in extent to the bronchitis, and the occurrence of this is improbable. The sputum was scanty on admission and became less. It did not pass through the stages which occur in bronchitis. Thus no signs of bronchitis were present. During the period of recovery the physical signs were never suggestive of bronchitis or of pneumonia. Therefore we look for an explanation of the collapse apart from changes in the lung. Acute pleurisy may reasonably be supposed to be able to result in an inhibition of the muscles of respiration. A normal lung undoubtedly will collapse more readily than a diseased lung. In acute pleurisy the lung is rarely normal. It is affected with pneumonia or other pathological conditions which impair its power of collapse. There is no reason to suppose that any of these conditions was present in this case. Apparently acute pleurisy occurred at the base while the lung was normal. Inhibition of the muscles of respiration followed and the collapse of the healthy lung was a necessary sequel. If this be so, as we believe, then inhibition of the muscles of respiration can be a cause of lobar collapse. Consequently it may be a cause in post-operative collapse. It does not follow that it is the only cause. In stating the reasons for the conclusions arrived at, certain points are indicated which may assist in the decision whether a case of lobar collapse is due to muscular inhibition or blockage of bronchioles from bronchitis. These are especially: the simultaneous presence of bronchitis, the character of the sputum, and the physical signs during expansion of the lung. Also it would appear that with blockage of bronchioles the affected side should measure less than the normal side even during expiration, except in elderly persons, while with spasm of the muscles the measurements should be equal.

Why does Collapse follow Inaction of the Respiratory Muscles?

The displacement of the mediastinum is the result of the collapse of the lung on the affected side and not the cause. The lung must collapse in consequence of the disturbance of existing forces. Now the diaphragm when paralysed will pass into the position of expiration. Except at the end of expiration the lung on the same side will be smaller than normal, as it is when a pleural effusion exists. The exhaustion of a corresponding amount of elasticity will result in a tendency for the heart and mediastinum to be drawn to the sound side, as occurs with pleural effusions. Further, the muscles of respiration on the sound side are unopposed,

and the component of their force which acts on the mediastinum will also tend to drag it over. Thus these disturbances would tend to displace the mediastinum towards the sound side.

The force which tends to displace the mediastinum towards the affected side is the elasticity of the lung. If all the muscles of respiration are paralysed or inhibited on one side, the elastic power of the lung is almost confined to pulling on the mediastinum, since this is the only area capable of further movement. If this elastic force is to result in the mediastinum being displaced towards the affected side, it must be greater than the forces mentioned above which have the opposite tendency. The affected side may be considered as a rigid box with a movable membrane, the mediastinum, let into one side. The whole power of traction of the lung is directed towards this area. On the sound side the forces acting on this area include the component of the muscles of respiration. The mean force of the muscles of respiration is little greater than the elasticity of the lung, apart from exceptional efforts. Thus on the sound side the total forces are perhaps three times as great as on the affected side, but they are spread over a much greater area, for the mediastinal surface of the lung does not exceed one-sixth of the total surface. This rough calculation suggests that the pull towards the affected side is double that towards the sound side. No accuracy can be claimed for this, but obviously there is no difficulty in understanding that the additional pull of the lung on the affected side of the mediastinum more than counterbalances the advantage which the sound side derives from the component of the force of the muscles of respiration. When a lung collapses the walls of the bronchioles fall together, and the air imprisoned in the alveoli is removed by the blood. This is an additional factor which would advance collapse after it had commenced.

Pleural Effusions and Displacement of the Mediastinum.

Reference has been made to the fact that during inhibition of the muscles of respiration the lung on the affected side will be smaller than normal, owing to the diaphragm being in the position of expiration, and that a disturbance of the forces acting on the mediastinum will occur as in pleural effusions. Let us suppose that a pleural effusion forms on the side of the collapsed lung. The resulting further compression of the lung exhausts a certain amount of its elastic force, and the mediastinum is consequently displaced by the unaffected elasticity of the normal side. A normal lung will contain about 2000 c.c. of air and weigh 600 grammes. To produce a disturbance of the forces similar to that resulting from paralysis of the muscles of respiration appears theoretically to need a pleural effusion of 1000 c.c. to 1500 c.c. (35 to 50 ounces). Several important factors cannot be estimated, including the power of the blood stream for absorption of air, but it may be said that if a pleural effusion of considerable amount accumulated on the same side as the paralysed muscles the mediastinum and heart would remain in their normal position.

It is well known that cases occur where considerable effusions are not accompanied by corresponding displacements of the viscera. In certain instances adhesions and fibrosis account for this, but inhibition of the diaphragm and muscles of respiration may explain some puzzling cases. Such inhibition, partial or complete, may result from acute pleurisy, and hence an absence of the expected displacement of the mediastinum is more likely to occur in effusions associated with acute pleurisy than in those of a passive or tuberculous nature. Moreover, the amount of collapse of a lung previously healthy will be greater than that of a diseased lung.

If the inhibition of the muscles commenced to pass away before the evacuation of the fluid, the resulting expansion of the lung would increase the pressure of the fluid in the pleural cavity. It is an unproved clinical impression that the pus in an empyema is under greater pressure than a tuberculous effusion of corresponding amount.

Conclusions.

1. Inaction of the muscles of respiration is a cause of acute lobar collapse.
2. Blockage of the bronchioles from capillary bronchitis may possibly have a similar result.
3. Lobar collapse may explain cases of pleural effusion without corresponding displacement of the mediastinum and heart.
4. In the case described, acute pleurisy occurred without changes in the lung. Inhibition of the muscles of respiration resulted in acute lobar collapse.

Bibliography.—Pasteur: Transactions of the Clinical Society of London, vol. xxviii.; THE LANCET, Nov. 7th, 1908, p. 1351; and Transactions of the Medical Society of London, 1911. West: Plastic Bronchitis, THE LANCET, Feb. 15th, 1908, p. 489.

PAIN AFTER OPERATION FOR INTERNAL PILES, AND ITS PREVENTION.

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FOR many years—in fact, since its inception—the operation for internal hæmorrhoids has enjoyed an unenviable reputation for being followed by severe pain. There is undoubtedly no question that in the past this reputation was well earned, and it is true that quite severe post-operative pain has been, and still is, the rule after this operation, except in the practice of a few surgeons who have made a special study of the means of preventing it. Undoubtedly many patients suffering from piles refuse to have them operated upon through fear of the pain which they are led to believe by their friends and their medical adviser is inseparable from an operation for their relief. On this account patients often continue to put up with serious discomfort and inconvenience for years.

The routine practice of many surgeons has been to administer opium freely after this operation, either hypodermically or in the form of suppositories, which is certainly an admission that severe pain is expected to follow the operation. My object in this paper is to consider the causes of post-operative pain in these cases, and the means by which it can be prevented. The skin at the anal orifice is one of the most sensitive areas in the whole body, sharing this distinction with the mouth, the lips, the fingers, and the big toe. We can easily realise the high degree of nerve sensibility in the anal canal by considering the necessary functions which this orifice has to fulfil. Sensation at the anal orifice is a delicate and important matter; not only does it detect the presence of flatus in the rectum, but it also differentiates between flatus and liquid, and

in fact, for delicacy of sensation, may be compared with the sensation at the tip of the tongue. But the sensation at the anal orifice is not only tactile. There are two senses: one is tactile, produced by contact of the contents of the bowel with the mucous membrane of the anal canal, and the other is the muscle sense, which may be described as the sensation caused by the stretching action of the muscle due to something within its grip. The sensitive area is practically confined to the anal canal proper; from an inch to an inch and a half above the anal orifice the mucous membrane is hardly at all sensitive except to distension of the rectal lumen.

The operation for piles of necessity implies interference with this sensitive area. Now, almost all the sensations at the anal orifice have for their immediate object some alteration in the state and degree of contraction of the sphincter muscle, and the action of this muscle is almost entirely reflex in character. It is therefore easy to understand why operations in this area are liable to result in pain, since the wounds cause constant irritation of this reflex, with consequent spasm and painful contraction of the muscle. Realising this, and influenced by the teaching of Hilton, surgeons attempted to prevent post-operative pain by stretching this muscle and so causing temporary paralysis. This was not successful, however, because, in the first place, unless the muscle is actually damaged paralysis is too transient—not lasting more than 30 minutes in most cases, and often not as long—and also because the muscle in the process of recovering its powers of contraction contracts spasmodically, causing sudden violent pain each time one of these contractions occurs.

The relief of pain by opium and morphia, while preferable to allowing the patient to suffer, is not satisfactory. To be of any real use it must be administered at frequent intervals for several days. Even then it will have the effect of making the patient feel ill and uncomfortable, and often of rendering him quite miserable. How, then, can we best prevent pain after this operation? The answer is that pain can be prevented by applying the same principles that have enabled surgeons to avoid pain resulting from operation wounds in other parts of the body. We have found that if a wound is made with no bruising or tearing of the tissues, under aseptic conditions, through clean tissues, and is kept aseptic and at rest, pain, except of a very slight and transient character, does not result. The anal region is no exception to this rule, and, given the same conditions, after-pain will be equally absent from operations in this region. Many surgeons, however, have assumed that an operation for piles cannot be carried out under aseptic conditions owing to its involving the rectum, and have therefore been content to perform this operation under conditions which they know are not aseptic, in that the tissues are not aseptically clean, or that contamination of the wound during or immediately after the operation is almost certain to take place. By a little alteration of the technique of the operation the conditions usually obtained for other operations can be secured when operating for piles. Very careful attention to the details of aseptic technique must, however, be observed in order to obtain success. The patient must be so prepared for operation that the rectum is quite empty and will remain so for some days. This is essential. The rectum and the whole of the field of operation must be thoroughly washed out with soap and water, and afterwards with a suitable antiseptic, until the surgeon is satisfied that the area of operation is surgically clean. The sphincter should not be stretched or damaged in any way, and the patient must therefore be thoroughly and deeply anæsthetised, or the sphincter will be in a condition of spasm which will render it impossible for the surgeon to reach the piles properly. The operation must be carried out with as little damage to the tissues as possible. By this I mean that pressure forceps should not be applied to tissues which are not going to be removed, that the mucous membrane or skin at the anal margin must not be included in ligatures, and that the number of ligatures applied for the control of hæmorrhage must be reduced to the smallest possible number. After the completion of the operation the wound must be bathed with some suitable antiseptic, the best, in my opinion, being 1 in 40 carbolic. Lastly, some form of dressing must be applied which will prevent infection of the wound. For this purpose I have found sterilised vaseline to be the best, and the lower part of the rectum may be filled with this.

For the last ten years I have been operating for piles on these lines, using the ligature operation in all but a few special cases, and I have found that post-operative pain is not more severe or frequent than after operations for hernia or varicose veins. Morphia is not required except as a hypnotic or to prevent the bowels from acting, and in the great majority of cases there is no pain of any consequence after the operation. Of course, it occasionally happens that the aseptic technique breaks down and infection of the wound occurs, with the result that post-operative pain requiring the use of morphia follows; but with increasing experience I have found that these cases have become less and less frequent, and most of the failures have been due to the fact that the preparation of the patient to ensure the bowels being empty has not been sufficiently carefully carried out. Pain after this operation, instead of being the rule, has become quite the exception.

Pain when the bowels act for the first time is avoidable with care and good nursing. With a skilled nurse pain after an action of the bowels is the exception. There is nothing to be gained by keeping the bowels confined for more than three or four days, as by that time the wounds in the anal canal have commenced to granulate and infection will not result in pain. After this a mild aperient daily is all that is necessary. I never allow the interior of the bowel to be interfered with in any way until all the ligatures have separated, except by the administration of a small injection of oil into the bowel daily to assist smooth action and protect the surface of the wounds.

I think it is better not to interfere with the patient's diet in any way, and instead of putting the patient on a slop diet after operation I allow an ordinary diet, but the amount of this is somewhat diminished until the bowels have been opened. I find patients are far less likely to get indigestion or discomfort, and the bowels are more easily relieved when the diet is not altered. Suddenly to put a healthy man on a diet of milk is quite sufficient to give him indigestion without the added factor of an operation and confinement to bed.

It is obviously difficult to obtain reliable statistics on such a subject as post-operative pain, but the

following figures may, I think, be taken as approximately correct. They show the result of the last 200 consecutive cases of piles from my private case-books. All the cases in the series have been in private nursing homes, and the after-treatment has been carried out under my own personal supervision. Of the 200 cases 143 were men and 57 women. Of the total number only 28 (14 per cent.) complained of pain after the operation sufficiently severe to require an injection of morphia; and in only 8 cases (4 per cent.) was the pain bad enough to require more than one injection of morphia. In all the remaining cases pain was altogether absent or was relieved by 10 grains of aspirin, or by some simple measure such as a hot-water bottle.

I think these figures will compare very favourably with those for post-operative pain after any operation other than that for piles, and they show that there is no necessity for any special liability to pain after the operation for piles. These figures refer only to the ligature operation, cases treated by the cautery or Whitehead's operation having been excluded.

I have not worked out the figures for my cases treated in hospital during the same period, but I think the proportion of cases having pain is somewhat higher. It is difficult to obtain reliable figures in hospital practice owing to the fact that the house surgeon is constantly being changed, and while one can be depended on to keep the notes accurately in this respect another cannot. It must also be remembered that the same amount of individual attention cannot be given to hospital patients that is given to patients in private homes. Even in my hospital patients, however, it is quite the exception for morphia to be required after an operation for piles.

Hyde Park-place, W.

THE EARLY DETECTION OF DIABETES BY A SIMPLE METHOD OF ESTIMATION OF THE BLOOD SUGAR.

BY DR. OSCAR-KRAUS,
CARLSBAD.

SINCE urinalsis has become a usual method of investigation cases have been frequent in which different symptoms seem to point to the diagnosis of diabetes, and yet the urine does not show any trace of sugar. It is commonly said that when the amount of the sugar normally contained in the blood or, as it is called, the "sugar level," rises, by degrees the filtering apparatus of the kidney becomes permeable and the sugar passes into the urine. Consequently there must be a previous period in which, although there is not as yet any sugar in the urine, still there must be a greater amount than is normal in the blood.

Unfortunately estimation of the blood sugar has not hitherto been easy of performance on account of the great discomfort connected with the methods by which blood was obtained—namely, either by bleeding or by venæpuncture. But in November, 1912, Max Adler and myself[1] published a new method by which it is rendered possible to obtain 15 drops of blood by a simple needle prick in the finger, and with this quantity to make an accurate estimation of the sugar contained in the blood. We originally performed the titration by using Fehling's solution very highly diluted, i.e., 1:10, and obtained good results. But as the method presented certain difficulties, especially for less trained operators, I substituted a new method of titration which permits the end of the reduction to be readily observed.

[1] Zur Bestimmung des Blutzuckers, Berliner Klinische Wochenschrift, Nov. 18th, 1912, No. 47.

The analysis of blood sugar is carried out in the following manner. The pulp of the middle finger is thoroughly cleansed with ether and alcohol and a prick made with a Francke's needle, and about 15 drops of blood are dripped into a special small glass receptacle. The latter has a mark roughly indicating 1 c.c. and a second indicating 2 c.c. There must always be an excess of 1 c.c. of blood. Then by means of a capillary pipette 1 c.c. is measured into a small beaker and the pipette washed out with very little distilled water.

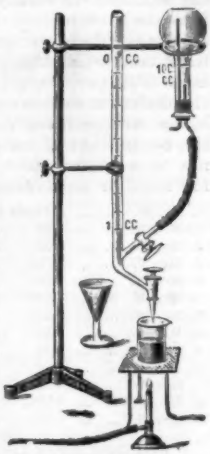
The sugar estimation consists of two parts:—

(*a*) *The dealbuminisation.*—This is carried out according to Max Adler's modification of Michaelis' and Rona's method. The liquid in the beaker is cautiously heated, whilst stirring it up, until it begins to turn turbid. Then 4–5 drops of 10 per cent. ferrum oxydatum dialysatum duplex (Merck) are added, and subsequently a few drops of a saturated watery solution of potassium sulphate, with constant soft boiling and stirring. All of a sudden the albumin will accumulate on the surface, while the liquid beneath will become absolutely clear. It is then very easy to separate the clear liquid from the albumin by filtering it into another small beaker and washing twice with hot distilled water. This liquid will hold all the sugar contained in 1 c.c. of blood.

(*b*) *The titration.*

I. *Preparation of the Standard Solutions.*

1. *Copper standard solution.*—2 grm. of sulphate of copper are exactly weighed and dissolved in about 100 c.c. of water and cooled down. Then 400 grm. of sulphocyanate of potassium, 12 grm. of ignited carbonate of sodium, and 24 grm. of citrate of sodium are dissolved with the aid of heat in about 600 c.c. of distilled water and filtered. It is then cooled down and the copper solution added by slowly pouring it into the other solution with constant stirring. 5 c.c. of a solution of 5 per cent. of ferrocyanide of potassium are now added and the whole is diluted with distilled water to exactly 1000 c.c. This solution, as compared with Fehling's solution, has the great advantage that it consists of a single liquid and keeps unaltered.



Special capillary burette for the estimation of blood sugar.

2. *Sugar standard solution.*—0·165 grm. of pure glucose is dissolved in a flask that holds 100 c.c. and is provided with a mark. Then a double tube is inserted and the bottle, neck downwards, is put into communication with a special burette by means of a rubber tube (see illustration). This burette holds 1 c.c. divided into 100 subdivisions.

II. *Testing the Standard Solutions.*

25 c.c. of the cuprous solution, with 25 additional c.c. of distilled water, are measured into a beaker and heated; then the sugar solution, still boiling,

is poured into the beaker, at first rapidly, finally drop by drop. We generally use 3·35–3·36 c.c. to reduce 25 c.c. of the cuprous solution. The reaction is complete when the colour changes from light blue to faint canary. By a special device a second, third, and fourth c.c. can subsequently easily be passed from the flask into the burette without removing the latter from the flame. This result will hold good for a long time, because the sugar solution will not be easily altered, provided a small crystal of thymol is added. The titration of the blood sugar takes place on the same principle. 25 c.c. of the standard solution are added to the blood filtrate and heated, and the end point will be obtained by addition of the sugar solution. The difference between the result of the test titration and the amount of sugar solution that it was necessary to add to the blood filtrate, when multiplied by 0·165, gives the percentage of sugar in the blood.

There has been lately a tendency in the German literature of the subject to differentiate between the sugar content of the blood cells and that of the serum. But the results of the researches of the different authors with regard to this point differ so much that we have been justified hitherto in neglecting this question, the more so as for practical purposes only the figures of the total blood-sugar content are of importance. There is still another question worthy of a careful study—namely, that of "rest-reduction," as it is called in the German literature. It is most interesting to know which reducing substances contained in the blood are liable to fermentation and which are not. We hope to be able to publish the result of our investigations concerning this matter later on. Our first care after having worked out the above method[2] was to compare it with old methods, which would work only with larger quantities of blood, and we found that it worked with absolute accuracy.[3] These comparisons having given satisfactory results, we endeavoured to find out what were the figures of the blood-sugar content, while the stomach is empty, in individuals whose carbohydrate metabolism was normal. The following 25 cases from our practice show that the upper limit is at 0·114, the lower at 0·078, while the mean is at 0·09 per cent. We do not think that either the different authors or we ourselves have hitherto had a sufficient number of observations to allow of the estimation of an average figure, which should not be a merely fortuitous one. Only with a very big number are average figures trustworthy.

1. Mr. W.	... ...	0·11 per cent.	
2. Mrs. B.	... ...	0·09	,,
3. Mr. B.	... ...	0·08	,,
4. Mrs. F.	... ...	0·086	,,
5. Mr. Th.	... ...	0·079	,,
6. Mrs. K.	... ...	0·089	,,
7. Mrs. M.	... ...	0·010	,,
8. Mr. H.	... ...	0·10	,,
9. Mr. M.	... ...	0·10	,,
10. Mrs. M.	... ...	0·09	,,
11. Mrs. W.	... ...	0·089	,,
12. Mr. S.	... ...	0·106	,,
13. Mrs. S.	... ...	0·106	,,
14. Mr. J.	... ...	0·087	per cent
15. Dr. S.	... ...	0·094	,,
16. Mr. E.	... ...	0·08	,,
17. Mr. B.	... ...	0·10	,,
18. Mr. V.	... ...	0·109	,,
19. Mrs. F.	... ...	0·09	,,
20. Mrs. C.	... ...	0·114	,,
21. Mr. H.	... ...	0·085	,,
22. Mrs. A.	... ...	0·094	,,
23. Own blood	...	0·09	,,
24. Miss F.	... ...	0·089	,,
25. Miss L.	... ...	0·10	,,

I will now show the way by which this estimation of the blood-sugar content can be utilised in determining the tolerance in diabetics. The following case is a very good example.

The patient, a diabetic, called on May 17th, 1913, when his urine was found to be free from sugar, but, on the other hand, the blood test showed an excess of sugar—namely, 0·163 per cent. before breakfast. He was put on the Carlsbad cure with appropriate diet. 27th: The figure was 0·086 per cent. before breakfast, a normal amount. Accordingly, on June 2nd 50 grammes of white bread were allowed for breakfast, the same quantity for lunch, and the blood was tested two hours after lunch. It showed a figure of 0·12 per cent., still a little too high, and therefore the total amount of bread was reduced to 60 grammes (30 for each meal) on June 4th, when the figure was 0·087 per cent. The next day 80 grammes were permitted, with a resulting figure of 0·10 per cent. Consequently the optimum of tolerance for white bread lay at about 70 grammes, corresponding to 40 grammes of carbohydrates according to Schwenkenbecher's table of foods.[4]

The above case is, from various points of view, very instructive and demonstrative. It shows, first, that a diabetic may have too much sugar in his system, even when he has none in the urine. His "internal tolerance" is not yet up to the assimilation of any amount of carbohydrates. It would therefore be a great mistake to stop the antidiabetic treatment (special diet included) until the blood test shows normal figures before the first meal in the morning. Then only is the patient fit for tolerance tests with measured quantities of carbohydrates. We always try white bread, because it is the very thing the patient craves for, and we administer it at the first two meals, just as it is taken in practice. Patients generally can dispense with taking bread in the evening. If the allowance is too high we reduce it, and *vice versâ*. Once the proper quantity is known it is a very simple thing to substitute other sources of carbohydrates, such as cereals, soups, fruit, and so forth, for the whole or part of the bread allowance, and thus to vary the *menu*.[5] Patients are but too thankful to know what they are entitled to instead of guessing. I do not want to complicate this simple statement by going into minute details, as, for instance, acetonuria, different tolerance for different species of meal (wheat, corn, potato, and so on), but I owe the reader a motive for the title of this paper. Here it is.

I stated that cases were frequent in which different symptoms would point to the diagnosis of diabetes and yet the urine would not show any trace of sugar. These symptoms are the well-known premonitory signs of diabetes, affections of the skin, pruritus, fall of the hair, &c. In many cases of the kind I could find a hyperglycæmia and the symptoms would subside after an appropriate light antidiabetic treatment. The following cases are very interesting.

A. B., a Brazilian, consulted me on July 3rd, 1912, with acne furunculosa of the face and the diagnosis of "gouty disposition," on account of which he had been advised not to eat too much meat and nitrogenous food, but more green food, fruit, and carbohydrates. He had no sugar in the urine, yet his blood test showed 0·16 per cent. before breakfast—i.e., hyperglycæmia—which subsided readily on appropriate treatment, as also did the furunculosis. It is obvious that his previous diet had been just the reverse of that which it ought to have been.

A compatriot of A.B. called on July 18th of the same year. He was very obese, and although his urine was all right he was afraid of diabetes on account of similar cases in his family. Fortunately, his fears were not well-founded, his level being at 0·10 per cent., within normal limits.

A. B. had suffered for two years from sycosis and general furunculosis. There was no sugar in the urine, but 0·28 per cent. after 100 grammes of dextrose and 0·16 without taking anything in the morning.

[2] Oscar-Kraus: Eine Neue Methode der quantitativen Blutzuckerbestimmung, Wiener Medizinische Wochenschrift, No. 26, 1913, and previously; Max Adler and Oscar-Kraus: Ibid., 1913, No. 18, and lately; Oscar-Kraus: Ibid., 1913, No. 47.

[3] For special details see the publications given in preceding footnote.

[4] At Georg Thieme's, Leipzig, 1907.

[5] The above-mentioned or similar food tables will give the percentage of carbohydrates contained in different kinds of food; for example, boiled potatoes 21, mashed potatoes 5, cocoa 34·2, cauliflower (boiled) 3·5, asparagus 1·3, soups of cereals 7, nuts 13, almonds 7·8, oranges 5·5, apples 12, and so on.

Another very interesting case was that of a patient whose family medical attendant had found sugar in the urine, while another practitioner on the same day had found none. The latter was right, because after examination there were a great many reducing substances in the urine, but no sugar. Yet the blood test showed (July 15th, 1912) 0·30 per cent. before breakfast—i.e., hyperglycæmia.

Whether these and similar cases of hyperglycæmia will end in real diabetes time alone will show. At any rate, experience teaches that diabetes, of all affections, should be attended to as soon as possible, and the examination for blood sugar is the proper means for its early detection.

We began our researches in response to the demands made by our daily practice in the treatment of diabetics. But comparisons of our method with the old ones, working with great quantities of blood, show that it holds good also for the purpose of physiological and clinical study, so far as sugar is concerned.

Since Adler and I published our first article in November, 1912 (showing that with the aid of highly diluted solutions it was possible to get trustworthy and accurate sugar estimations from the analysis of a few drops of blood obtained by a simple needle-prick), as always happens, others have seized upon our idea, modifying one of the many old procedures, or even adapting new ones, to our method. But we claim that we were the first to lead the way. We cannot see that any of the methods since published are simpler, quicker, or more trustworthy than ours, and until we find a better one we shall stick to it.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF PNEUMONIA PRESENTING SOME UNUSUAL FEATURES.

BY A. AINSLIE HUDSON, M.D. EDIN., F.R.C.S. EDIN.

THE following case may prove of some interest by reason of its infrequent features. Indeed, if physical signs mean anything, they meant in this case that the two forms of acute pneumonia were present at one and the same time in the same individual.

The patient, aged 62 years, came under my care with a history of a definite rigor and other symptoms suggestive of a chill. The physical signs were for the most part indefinite when I first saw the case, the first definite signs being those associated with a small patch of pleurisy at the left base. On the second day towards evening the temperature rose to 103·6° F., with pulse and respirations in close attendance, and there was some cyanosis. On the third morning the temperature had fallen to normal, likewise the pulse and respirations, and the cyanosis had for the most part disappeared, so that one was constrained to consider the case as a sharp attack of influenza or possibly only a simple chill with some respiratory symptoms. However, towards evening the temperature rose again to 100·5°, the sputum became rusty and very viscid, physical signs made their appearance in both lungs, and the patient's general condition became worse. On the fourth morning the temperature had again fallen to 99°, rising to 101° at night, the general condition remaining much the same in spite of the rapidly extending involvement of the lung tissue. On the fifth day the temperature was normal again, rising to 100·8° at night, the cyanosis increased, and there were periods of semi-delirium. On the sixth morning the pulse began to fail, coma set in, and the patient died suddenly at 8 o'clock, five and a half days from the onset of the disease.

The solidification of the left lung had begun on the third day, and by the fifth day the whole lung was more or less involved. While this process was going on in the left lung the right had begun to show isolated patches of catarrh, but by the end of the fifth day there was hardly a clear area to be found, although there was no consolidation to speak of. The pleurisy had only spread slightly and there was no effusion. Some emphysema was present towards the end. The tongue remained clean throughout. To summarise briefly, the pulse and temperature behaved more like in a case of out-and-out broncho-pneumonia, and one would have been inclined to consider the case as such had the catarrhal signs showed first, but they only appeared subsequently to the evidence of consolidation in the first lung, which eventually involved that organ from base to apex, whereas in the catarrhal lung there was no marked consolidation. The temperature on three mornings had been normal, and the pulse and respirations had greatly improved. The temperature never went above 101° except on the second evening when it rose to 103·6°, and there was no doubt about the consolidation of the left lung, which presented signs entirely absent in the other lung. The patient was put into a hospital and seen by three other practitioners who confirmed my opinion. The usual treatment was employed.

Llandrindod Wells.

A RECORD OF ANÆSTHETICS AND ITS STATISTICAL LESSON.

BY D. J. MUNRO, M.B., B.S. LOND.,
ANÆSTHETIST TO THE LONDON THROAT HOSPITAL.

OUT of nearly 2000 administrations during the last two years notes were kept relating to complexion, speed of induction, and depth of anæsthesia in about 200 cases. This was done with no very definite object beyond a curiosity as to what results might emerge. Apparent variations in the tables (averaging an error of less than 3 per cent.) are due to differences in the anæsthetic agent given, the figures for nitrous oxide and ethyl chloride—though most used—being too small to be employed for statistics. Table I. suggests that fair subjects

TABLE I.—*Complexion in Relation to Anæsthesia.*

	Induction.			Depth of anæsthesia.		
	Rapid.	Medium.	Slow.	Shallow.	Medium.	Deep
Fair (111)	79	—	32	44	34	33
Dark (96)	53	8	35	44	27	25

are somewhat more susceptible to the effects of anæsthetics than dark ones, not only with regard to the rapidity with which they can be put to sleep, but also in respect of the depth of anæsthesia resulting. Table II. sounds a warning against too rapid induction, since it indicates that rapid induc-

TABLE II.—*Speed of Induction in Relation to Depth of Anæsthesia.*

	Shallow.	Medium.	Deep.
Rapid induction	43	39	50
Slow (and medium) induction	47	20	8

tion is much more likely to be followed by deep anæsthesia than slow induction; but this warning is qualified very considerably by Table III., which shows that almost all the cases of deep anæsthesia following rapid induction occurred when ether was

the principal anæsthetic given, while with chloroform or C.E. mixture as the principal anæsthetic

TABLE III.—*Relation of Speed of Induction to Depth of Anæsthesia under Three Principal Anæsthetic Agents.*

		Shallow.	Medium.	Deep.
Chloroform	Rapid	24	8	2
	Slow	21	9	—
C.E. mixture	Rapid	4	2	3
	Slow	5	1	—
Ether	Rapid	13	30	45
	Slow	22	10	8

it was nearly always easy to maintain a light degree of anæsthesia, whether induction had been speedy or slow, and it may be legitimately deduced from this table that for difficult nose and throat operations, where it is of the highest importance to preserve the coughing or swallowing reflex, chloroform is undoubtedly the anæsthetic of choice, while for operations on the trunk or limbs, when deeper anæsthesia is either advantageous or of no particular moment, ether is to be preferred, especially by those who give anæsthetics comparatively seldom.

Great Portland-street, W.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF DERMATOLOGY.

Exhibition of Cases.

A MEETING of this section was held on April 16th, Dr. J. J. PRINGLE, the President, being in the chair.

Dr. GEORGE PERNET showed a case of Double Primary Chancre of the Lips in a man. The patient was first seen on March 17th, suffering from a roseolar and papulo-squamous eruption on the body which had been preceded at an interval of five weeks by the sores on the lips. There were no lesions on the genitalia. Neosalvarsan (0·9 grm.) was injected intravenously on March 22nd, and this was followed by some diarrhœa, abdominal pain, and a toxic erythema on the hands and knees.—Sir MALCOLM MORRIS asked when the last Wassermann reaction had been tested.—The PRESIDENT inquired if there was a history of the patient having smoked another person's pipe, and if the toxic eruption was regarded as a "Herxheimer's reaction." In his experience multiple chancres of the lips were not very uncommon.—Dr. A. M. H. GRAY asked if the neosalvarsan was used in concentrated or in dilute solution, his experience being that the concentrated solution was not followed by severe reaction.—Dr. ARTHUR WHITFIELD regarded Herxheimer's reaction as a specific reaction of syphilitic tissue to salvarsan, but did not consider the case under discussion as an example of it.—Dr. F. PARKES WEBER asked if the fauces were involved in the erythema.—In reply to the PRESIDENT, Dr. H. MACCORMAC said he had not observed the Herxheimer reaction so frequently after neosalvarsan as after the old salvarsan, and Dr. GRAY said he had seen it more often after small than large doses.—Dr. PERNET said the Wassermann reaction had not been tested, the manner in which the disease was contracted had not been ascertained, and, as the patient was suffering from a syphilitic throat, it was impossible to say if the fauces were involved in the toxic erythema. He questioned the utility of retaining the term "Herxheimer's reaction" and doubted its specificity.

Dr. W. KNOWSLEY SIBLEY showed a woman, aged 35, suffering from Symmetrical Telangiectases of the Face, Mucous Membranes of the Mouth and Conjunctivæ, which had begun on the face six months previously. The patient had suffered from a similar attack six years ago and was then under the care of Dr. H. G. Adamson. Her sister was stated to have a similar condition affecting the abdomen.—Dr. ADAMSON said the patient had been shown by him six years ago, and the condition had not altered in any way.—The PRESIDENT interrogated the patient closely as to the disappearance of the lesions, and she was quite certain that this had occurred.—Sir MALCOLM MORRIS said he had seen spider nævi disappear spontaneously, and Dr. C. DUDLEY CORBETT had observed the same phenomenon after pregnancy.—Dr. PARKES WEBER said the spider nævi of very young children might disappear, and also those accompanying jaundice and liver disease in adults. Dr. Sibley's case came into the category of multiple telangiectases of the skin and mucous membranes with a tendency to bleeding which had been described by Sir William Osler and others. Referring to the presence of De Morgan's spots in the case, he agreed with the exhibitor that they were not specially associated with abdominal cancer.—Dr. MACCORMAC mentioned a case of Dr. Pasteur he had observed in which a large number of multiple telangiectases occurred in a patient suffering from gastric ulcer, and which had completely disappeared.—Dr. WHITFIELD discussed the varieties of nævi with reference to the case exhibited: a nævus in the continental sense of the word was a congenital anomaly of the skin, but so-called "spider nævi" often followed the bites of flies and mosquitoes and were minute traumatic aneurysms. The type associated with cancer were not true nævi. He regarded the case as a nævus.—Dr. GRAY remarked that stellate nævi were sometimes associated with cirrhosis of the liver, and inquired if Dr. Sibley had investigated the case from this point of view.—Dr. J. M. H. MACLEOD remembered a patient in whom typical telangiectatic lesions accompanied gastric ulcer; he looked upon the case under discussion as a congenital spider nævus.

Dr. SIBLEY also showed a woman, aged 27, who presented small Punctate Hæmorrhages of 13 weeks' duration, scattered over the chest, back, and shoulders, and hæmorrhages in the mouth. The patient also had multiple furunculosis and pyorrhœa alveolaris.

Dr. G. NORMAN MEACHEN brought forward a girl, aged 15, with persistent Erythema of the Legs of 2½ years' duration accompanied by severe pain, which was increased by the dependent position and was unrelieved by salicylates. There was also passive congestion of the hands. Her heart sounds were normal.—Dr. PARKES WEBER thought the erythema was of the type seen in Bazin's disease.—Dr. ADAMSON said the erythema of that condition was of the "livedo" type, but the present case was diffuse.—Dr. WHITFIELD did not consider the cyanosis of Bazin's disease was a sufficiently important factor upon which to found a diagnosis in the absence of nodose lesions.—The PRESIDENT asked if there was any tuberculous taint in the patient or in her family; his general appreciation of the case agreed with Dr. Whitfield's. He remembered two similar cases which had recovered after puberty.

SECTION OF OTOLOGY.

Exhibition of Specimens and Cases.

A MEETING of this section was held on April 17th, Mr. RICHARD LAKE, the President, being in the chair.

Mr. G. H. L. WHALE exhibited the specimen of a Temporo-sphenoidal Abscess from a fatal case in a girl, aged 8 years, who had had otorrhœa for three weeks, and was taken to hospital on the second day after the onset of drowsiness. In the left meatus were fœtid pus and a polypus. Mastoid signs were absent, but there were marked ptosis and slight dimness of the edge of the optic disc. On the opposite side there were paresis of the orbicularis oris and marked dimming of the edge of the optic disc. These signs on the right side soon disappeared. The temperature and knee-jerks were normal, and there was no head retraction. The labyrinthine caloric responses were normal but sluggish. The cerebro-spinal fluid was neutral and non-reducing. At the radical mastoid operation a little pus was found in the antrum, but no fistulæ. On incision of the dura there was immediate pulsation and the formation of a hernia. The temporo-sphenoidal lobe was explored in all directions, but no pus was found. On the fourteenth day the temperature commenced to rise, and on the seventeenth had reached 104° F., but with no symptom except projectile vomiting. The cerebro-spinal fluid was under pressure, and there was a considerable increase of lymphocytes, and some polymorphonuclears were found.

Vomiting now ceased, but the temperature became subnormal and drowsiness increased. A second operation was performed on the twenty-fourth day, when about 2 dr. of offensive pus was evacuated from the temporo-sphenoidal lobe. A diphtheroid organism was recovered in pure culture. The drowsiness passed into coma and death occurred on the twenty-eighth day, after half an ounce of pus had been evacuated. At the necropsy the lateral sinus was found to be natural, but a large gangrenous abscess occupied the whole length of the under surface of the temporo-sphenoidal lobe—3½ inches.

Dr. DAN MCKENZIE showed a woman, aged 41, illustrating the Association of Nerve Deafness and Anæmia. A complicating feature was practically universal pyorrhœa alveolaris. He deferred judgment as to a causal connexion until he had observed whether the two conditions improved *pari passu*.

Mr. E. D. D. DAVIS exhibited an interesting case of Tuberculosis of the Mastoid in a male child aged 11 months. The patient was taken to hospital with an abscess of the superficial parotid glands, enlarged posterior auricular and upper deep cervical glands on the left side, left otorrhœa, and left facial paralysis. The parotid abscess was opened and curetted, and the enlarged cervical glands removed. Four months later a radical mastoid operation was performed, and more caseating cervical glands were removed. As the mastoid was still suppurating 12 months later the region was opened up, and the large sequestrum exhibited was removed from behind the lateral sinus. The disease was now arrested.—Dr. W. JOBSON HORNE contended that so-called primary tuberculosis of the ear was essentially a bone tuberculosis, starting in the mastoid process itself, not in the ear proper. In this remark he did not include cases of secondary invasion. In similar cases he had noticed a tendency to overlook the ear disease owing to the enlargement of the glands, so that the mastoid had been dealt with only subsequently. If the glands were left for a time it might be unnecessary to deal with them. The absence of pain was also apt to lead one away from the real source of the trouble.—Dr. J. DUNDAS GRANT pointed out that the course of events referred to by Dr. Horne applied specially to young children, in whom there was often the separation of a comparatively large sequestrum. This should be the objective of the surgeon rather than the performance of a radical mastoid operation in these young subjects.—Dr. W. A. MILLIGAN suggested inquiry into the source of the milk supplied to the child. He agreed with Dr. Grant that a set operation in children with this condition was not often called for. He differed from Dr. Horne as to primary tuberculosis of the ear being essentially a bone disease; he (the speaker), from the cases he had followed up, believed that the disease first attacked the mucous membrane, but bone involvement soon followed. He agreed that in operating it was advisable to leave the glands for a time, because he believed them to constitute a first line of defence. If it was clear that the basis of the inflammation was tubercle, the glands could be removed later.—Mr. WHALE described a case in which leaving the enlarged glands to be dealt with later proved to be wrong, for the result of doing the bone operation first was that the glands broke down before the operation wound healed, and the patient had a very bad neck.

Dr. G. F. STEBBING and Mr. G. J. JENKINS showed a post-mortem specimen of Malignant Disease of the Ear which had become very extensive, involving the lower part of the mastoid, and extending downwards to the level of the thyroid cartilage, backwards to the posterior border of the sterno-mastoid muscle, and forwards to the angle of the jaw. A soft, readily bleeding polypus was showing at the orifice of the right external auditory meatus. The growth involved the middle fossa of the skull.

Mr. JENKINS exhibited, and demonstrated by means of the epidiascope, some beautiful serial microscopical sections of the left temporal bone of a female aged 59. There were ankylosis of stapes and other changes in the region of the foramen ovale—otosclerosis. He also showed microscopical sections of mastoid, labyrinth, and middle-ear tract of temporal bone of a young adult male, who was very ill with phthisis, and was also suffering from deafness, otorrhœa, and facial paralysis. The preparations showed the presence of pus in the middle-ear tract, with mastoiditis and labyrinthitis.

MEDICAL SOCIETY OF LONDON.

Cerebro-spinal Syphilis.

A MEETING of this society was held on April 27th, Sir DAVID FERRIER, the President, being in the chair.

Dr. PURVES STEWART read a paper on the Diagnosis and Treatment of Cerebro-spinal Syphilis, including Tabes and General Paralysis. He spoke of the importance of the early diagnosis of the condition, emphasising the fact that a pre-clinical stage occurred. Organic changes preceded the earliest clinical symptom. The clinical stage was relatively late. It was during the pre-clinical stage that treatment was most likely to be effective. Fortunately, however, the disease might be recognised in this stage by examination of the cerebro-spinal fluid and of the blood. He then referred to the methods of examination of these fluids. The modern neurologist was no longer satisfied with the absence of clinical signs and symptoms indicating gross focal disease in the nervous system, even when the Wassermann reaction in the blood was negative. To assure himself that the central nervous system has escaped he examined the cerebro-spinal fluid. There were three distinct kinds of lesions: (1) gummata, rising in non-nervous tissues, and compressing or invading the brain or spinal cord, or diffuse gummatous infiltrations; (2) syphilitic endarteritis, frequently culminating in thrombosis; and (3) parenchymatous nervous diseases, characterised by a primary decay and degeneration of various nerve tracts and nerve cells, produced by the direct action of the syphilitic toxin. Examples of the last group were certain primary forms of optic atrophy, a considerable part of the lesions of tabes and general paralysis, Erb's syphilitic paraplegia and certain forms of organic nervous disease occurring in the children of syphilitic parents. Gummata might often be removed by medicinal means, and if the nerve structures had not undergone destruction recovery might be complete. In syphilitic vascular diseases the lesions in the arterial wall might yield to treatment, but if thrombosis had occurred and an area of softening resulted the damage must necessarily remain. Lastly, with regard to the primarily degenerative diseases, such as tabes and general paralysis, these had generally been uninfluenced or only slightly alleviated by antisyphilitic treatment. The present day treatment by a combination of mercury with salvarsan or neosalvarsan was applicable to cerebro-spinal syphilis if certain precautions were borne in mind. It was safer to give repeated doses of not more than 0·03 grm. salvarsan, for it was less likely to be followed by nerve relapses. Patients with renal disease or marked cardio-vascular disease were unsuited for this treatment. Dr. Stewart then gave examples of cases in which cerebro-spinal syphilis of the gummatous and vascular forms had been treated by the new methods. He then dealt with the treatment of parenchymatous nervous syphilis, pointing out the several reasons which rendered it singularly resistant to treatment. In order to reach and destroy the organisms to which it was due remedies must enter the cerebro-spinal fluid. This might be effected by administering salvarsanised blood serum intrathecally or by the direct injection of neosalvarsan into the cerebro-spinal fluid. Within the last six months he had treated 25 cases of parenchymatous nervous syphilis, including 13 of tabes and 9 of general paralysis, by one of these methods. Composite tables of (1) 11 cases of tabes and (2) 7 cases of general paralysis were exhibited and other detailed tables of individual cases. The composite tables showed generally a great decrease in the lymphocytosis of the cerebro-spinal fluid, whilst the Wassermann reaction of the blood and cerebro-spinal fluid tended to diminish or disappear. Enesol had proved useful in the treatment of the lightning pains of tabes, and had the advantage of being suitable for simple hypodermic injection. Acting on the known beneficial influence of pyrexia on general paralysis, he had treated this disease by inducing artificial pyrexia by means of large intramuscular injections of sodium nucleinate. Of 15 general paralytics thus treated by Donath, three were able to resume their ordinary work, six were improved, five were unchanged, and one died of apoplexy during the treatment. His own cases had provided a moderate amount of encouragement, for as far as he had been able to judge a more or less prolonged remission occurred in the clinical symptoms accompanied by a diminution in the intensity of the

lymphocytosis of the cerebro-spinal fluid in a considerable proportion of cases. He knew of no case, however, in which a cure had resulted. Urotropin was amongst the drugs which had proved useful as accessories in the treatment of general paralysis. He then related some of the results obtained in general paralysis by combined intravenous and intrathecal treatment, either with salvarsanised serum or with neosalvarsan. Other methods besides that of lumbar puncture might be employed to introduce remedies into the cerebro-spinal fluid. Thus this might be done by cranial puncture or through the orbit by penetrating the sphenoidal fissure with a hollow needle, or remedies might be injected directly into the ventricles of the brain by the callosal puncture of Anton and Bramann. When comparing intraspinal with intracranial administration it must be borne in mind that a long series of treatments was necessary, and it must be considered whether it was justifiable to submit a patient to the risks of repeated cranial operations unless these could be shown to yield results materially better than those obtained by intraspinal injections. In every one of the cases of general paralysis he had treated by the latter method the lymphocytosis of the cerebro-spinal fluid had diminished. In three of them the Wassermann reaction disappeared from the blood. In the cerebro-spinal fluid the Wassermann reaction usually became less marked, but in only one did it disappear. Before coming to definite conclusions numerous and prolonged observations over a large series of cases were necessary. Improvement in the condition of the cerebro-spinal fluid was a useful index, but we must remember that in general paralysis, at least, the cell count in the fluid might go down without any improvement in the mental symptoms. It was therefore important to select only those cases of general paralysis which were in the early or toxic stage of the disease, before the cortex had become profoundly degenerated. The earlier the disease was recognised the better were the prospects of improvement. Advanced cases were unsuitable. The most thorough method of attacking general paralysis would be to administer remedies concurrently by all three routes—intravenously, intraspinally, and intracranially, and it might be that in the future this combination would be adopted. It was too early to claim that we possessed a cure for tabes or general paralysis, but we could do a good deal towards arresting both diseases. Whether such arrest was permanent or not, time alone would show.

Mr. C. A. BALLANCE said he thought that in ordinary cases of syphilis the combined method of intramuscular injections of mercury and intravenous injections of salvarsan was the best form of treatment. In 83 so treated of which he had knowledge 80 developed no secondary symptoms. If this procedure were adopted one would not see cerebro-spinal syphilis so often. A simple method of obtaining a rise of temperature was by the injection of Coley's fluid, and possibly this might be of use in cerebro-spinal syphilis if a rise of temperature was desirable. The arachnoid membrane very definitely separated the subdural space from the subarachnoid, as was shown by clinical instances as well as by the work of Key and Retzius. It, therefore, seemed proper to inject salvarsanised serum or salvarsan into the subarachnoid space and not into the subdural. He did not consider it more dangerous to inject them into the intracranial subarachnoid space than into the spinal. The method he had adopted was to make an opening into the skull immediately in front of the bregma, and pass down a fine cannula 3 inches long through the anterior part of the corpus callosum into the anterior cornu of the lateral ventricle. The guide was the falx. The diameter of the cannula was 1 mm. A stilette ran through the cannula and, projecting slightly beyond it, protected the nervous tissue from serious damage. He had used from 30 to 60 c.c. of salvarsan solution, preceded and followed by a little normal saline. He could not speak of the beneficial effects of the method, but no complications had occurred in the 5 cases so treated, and it seemed a satisfactory way of introducing salvarsan and salvarsanised serum.

Dr. F. E. BATTEN did not think that parenchymatous syphilis was generally uninfluenced by treatment in early cases, and in recent years he had thought antisyphilitic treatment useful in early tabes and general paralysis. He had treated two cases of general paralysis which had resisted ordinary remedies by sodium nucleirate without improvement. The Wassermann reaction and cell content of the cerebro-spinal fluid had remained unaltered. He had used undiluted salvarsanised serum in one other which had not been benefited by mercury, but also without good effect. He spoke of the danger of injecting either salvarsan or neosalvarsan intrathecally.

Dr. ROBERT ARMSTRONG-JONES said he had given up mercury in the late stages of general paralysis. Pneumonia frequently occurred in general paralytics, but they were very rarely indeed improved by the resulting rise of temperature, in this way contrasting with the subjects of certain other forms of lunacy. Almost complete recovery might be seen in patients who appeared to have definite parenchymatous degeneration without treatment. The use of a thorium hydroxide cap had been followed by marked improvement, and in two cases by apparent recovery. He had experienced little benefit by the use of neosalvarsan, and regarded lumbar puncture as a dangerous procedure. There were 60 cases on record in which the operation of piercing the frontal bone had been performed, but it seemed to him a most difficult operation. In 330 cases of general paralysis he had found that the average duration from admission until death was one year and four months.

Dr. GORDON J. LANE, speaking of the treatment by nucleinate of soda, said that it led to a decided improvement and an increase in the red blood corpuscles and a leucocytosis chiefly of the large lymphocytes.

The PRESIDENT complimented Dr. Stewart on his paper, and especially on the critical manner in which he had stated his conclusions. He was a little disappointed in the results of the intrathecal method of treatment. It could not yet be said that any case was on record in which parenchymatous syphilis was cured by it. The only hope lay in the treatment of very early cases. In the one case in which he had seen neosalvarsan tried the result was disastrous, all the symptoms being intensified.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on April 3rd, Dr. T. WARDROP GRIFFITH, the President, being in the chair.

Dr. C. W. VINING showed: 1. A case of Left-sided Hemianopia (partial) in a man with a history of convulsive attacks, preceded by aurae of flashing lights. A provisional diagnosis had been made of a tumour involving the right occipital cortex. 2. A case of Paralysis Agitans in a woman aged 56. The patient began to lose the use of the right arm eight months ago; the tremor was noticed in November, 1913, and since then the condition had rapidly developed.

The PRESIDENT showed: 1. A case of probable Intracranial Tumour in a boy aged 5. The sixth cranial nerve of the left side was involved and there was right hemiplegia. Optic neuritis was marked in the left eye, and commencing in the right. 2. A case of Progressive Muscular Atrophy in a man aged 46. The disease began eight months ago with weakness of the right hand. Ulnar deviation was well marked and bulbar signs were present. The reflexes were increased, proving involvement of the upper motor neurons. Treatment by strychnine injections was being carried out.

Dr. G. W. WATSON and Mr. ALEXANDER D. SHARP showed a woman with Mitral Stenosis and Paralysis of the Left Vocal Cord. The patient came under observation with hæmoptysis, as a case of suspected phthisis. There was no clinical evidence of phthisis, but undoubted signs of mitral stenosis. There had been complaint of huskiness for some time, and laryngeal examination showed a complete paralysis of the left vocal cord. In addition there was impaired sensation on the left side of the tongue and on the left anterior faucial pillar. The patient had to be careful in the act of swallowing as she was apt to "choke."

Mr. R. LAWFORD KNAGGS showed: 1. A man with an Œsophageal Fistula traversing the right pleura. The case had been exhibited at the last clinical meeting and the passage of swallowed milk through the fistula demonstrated. There was a three years' history of intermitting pleural suppuration. Gastrostomy was performed and the patient was fed by the stomach till recently. He

was now taking solid food, and apparently nothing came through the fistula. 2. A case of Excision of Tuberculous Wrist in a man. When treatment by trypsin injections was commenced some six months ago the arm looked hopeless, and the treatment was given a chance before amputation was definitely decided on. Improvement speedily set in and had progressed steadily.

Mr. J. F. DOBSON showed a case of Diffuse Papillomata of the Bladder treated by suprapubic cystotomy, and subsequently by implantation of both ureters into the colon. The patient was perfectly comfortable and able to retain urine for five hours. The suprapubic wound was healed and nothing escaped from the bladder.

Cases were also exhibited by Mr. W. THOMPSON, Mr. J. A. COUPLAND, Mr. H. SECKER WALKER, and Dr. A. L. WHITEHEAD.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Congenital Icterus.—The Relation between the Mechanism and Management of the Third Stage of Labour.—Exhibition of Specimens.

A MEETING of this section was held on April 3rd, Dr. M. J. GIBSON, the President, being in the chair.

Mr. SPENCER SHEILL read a paper on Congenital Icterus. —Dr. E. HASTINGS TWEEDY said that he had seen a great many cases of jaundice in infants, some of which had terminated fatally, and he had seen a good many post-mortem examinations on these cases, and was surprised at the number of defective ducts found. He was particularly interested in the suggestion that these cases should be subjected to surgical interference. He had not heard it suggested before. Infants bore abdominal section badly, and this was more particularly true of jaundiced infants. He inquired if there were any statistics of successful operations in these infantile illnesses. He mentioned that infants were frequently starved for want of water, and suggested that they did not get enough fluid in the early days after birth. He thought that jaundice arose from want of sufficient fluid, and that this was particularly the case in premature children. He pointed out that children were kept in a hot atmosphere and required a good deal of water. He wondered if the insufficiency of water would account for the viscosity of the bile. —Dr. GIBBON FITZGIBBON asked whether at the operation on the gall-bladder it was possible to make out if it was an obstructive jaundice; also what was the condition of the liver? Was there any enlargement or anything which would suggest a syphilitic condition?—Dr. SPENCER SHEILL, replying to the remarks, said on examination the liver appeared in every way normal. There was no discolouration or enlargement, and it was not unduly hard or soft. He recognised that everybody was against laparotomy in infants, as they were in nearly 90 per cent. fatal. The literature on the subject was very scanty, but a few men who had operated said that operation gives bad results unless distinct obstruction was found in the duct. In his case he did not think the gall-bladder was so distended as to indicate obstruction, and the surgeon reported that the ducts were patent. He considered septic cord cases quite distinct. He was very particular about the prevention of over-clothing of infants, thereby sweating them, and not making up for it by water taken. In replying to a question from Dr. BETHEL SOLOMONS, he said that the parents refused any interference in the way of a Wassermann test, and from the history no information of any value could be elicited.

In the absence of Dr. J. R. FREELAND, Dr. TWEEDY read his paper, entitled the Relation Existing between the Mechanism and the Management of the Third Stage of Labour: a report of 2000 cases from the Rotunda Hospital. —The paper was not discussed.

Dr. BETHEL SOLOMONS exhibited a Uterus with Cervical Myomata removed from a patient 37 years old, who had been married 11 years. In her first three years of married life she had two healthy babies who are still alive. Two years later she had an eight months' stillborn child; two and a half years later a nearly full-term stillborn child. In January, 1911, examination under an anæsthetic revealed an enlarged uterus with lacerated cervix and rectocele. Dr. Solomons performed curettage, trachelorrhaphy, and colpoperineorrhaphy. The curettings were found to be glandular endometritis. The patient enjoyed good health for about six months, when she became pregnant again, and was treated with potassium iodide and mercury during the pregnancy. At six months she was delivered of a macerated fœtus. This was examined by Professor P. T. O'Sullivan, who reported that there was no trace of the spirochæta pallida. A year ago menorrhagia and metrorrhagia started. These symptoms became aggravated in the last six months, and severe backache troubled her during the last two months. Dr. Solomons found a uterus in normal position with two large myomata, one growing from the back and the other from the side of the cervix. It might be asked why he did not perform myomectomy, which appeared from the specimen might have proved easier. He performed hysterectomy for the following reasons: (1) The age of the patient; (2) her fear of having more macerated babies; and (3) the fear of malignant degeneration having commenced. Dr. A. Stokes, who examined the specimen, reported as follows: "Endometrium, glandular endometritis. Myoma, simple, with early mucoid degeneration. Cervix normal." It was difficult to account for the frequent stillborn babies. Syphilis, endometritis, and tumours are generally regarded as the most common predisposing factors. There was evidently no syphilis. The endometritis might have accounted for the first two, but this was cured and could not have accounted for the last. The tumours were not present until two years after the birth of the first two, and until one year after the birth of the last stillborn child.

Dr. TWEEDY showed a specimen of Myoma, recently removed, which had undergone mucoid degeneration.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on April 17th, Dr. A. K. Chalmers, the President, being in the chair.—A paper was read by Dr. B. A. Peters, lecturer on infectious diseases, Bristol University, on the Elimination of Cross Infection in Fever Hospitals, in which he pointed out that, although surgery had long since abandoned the idea of the air being an appreciable factor in the conveyance of infection to a wound, medicine still regarded it as being the principal medium in the carriage of the common infectious diseases of children. At the Bristol fever hospital all patients were kept in bed for a fortnight after admission. During that time any secondary infection which might be incubating would have developed, and if the case were a doubtful one a definite diagnosis could be made. Each patient was provided with a separate towel, face-flannel, piece of soap, comb, and throat-brush, which were kept in a locker beside the bed. All eating utensils were boiled after each meal, and other utensils were cleansed and disinfected after use. The nurses wore rubber gloves lined with canvas when closely handling a patient, which were immersed in perchloride of mercury solution before going on to the next patient. These methods had been quite successful in preventing the spread of scarlet fever, diphtheria, whooping-cough, rubella, or mumps when accidentally introduced into a ward not intended for their reception. Previous to the introduction of this system in 1911 about 2·5 per cent. of the patients contracted a second disease while in hospital, the only available means for limiting the number of secondary cases after the removal of the infecting patient being to cease admissions to the infected ward until the secondary infection became extinct for want of further susceptible patients. In the first year after the introduction of the new system only two patients contracted measles and one chicken-pox. The next step was to keep the windows of the acute wards open all the year round, which procedure was completely successful in preventing the spread of secondary infection in those wards in spite of 13 invasions of chicken-pox. One important result of aseptic nursing was a marked diminution of late septic complications, including especially rhinitis. During the past two years the minimum detention period in the Bristol fever hospital had been reduced to one calendar month in the case of scarlet fever, desquamation being ignored.—Dr. Robert Milne maintained that by swabbing the tonsils and pharynx with 10 per cent. carbolic acid every two hours for 24 hours, and rubbing

eucalyptus oil over the patient until the tenth day of the disease, cross infection was completely prevented.—Dr. G. S. Buchanan pointed out the importance of taking into consideration the limitations of all experiments in the infectivity of disease, for each infectious disease must have its own natural history, and infectivity was greater at one time than it was at another. He considered it highly probable that a reduction in the number of septic cases would result from the extreme care taken in regard to secondary infection.—Mr. E. H. T. Nash, referring to the success attending Dr. Milne's own cases, pointed out that it was possible for him to begin to treat the cases occurring in the Barnardo Homes much earlier than a medical officer of health could begin treatment in an isolation hospital.—Dr. Meredith Young insisted upon the importance of getting cases into hospital early and of avoiding overcrowding. It was important also to recognise that otorrhœa and rhinitis were definitely communicable. He did not believe that infection was in the skin. Children were sent out of the Stockport hospital when peeling, but secondary infection rarely resulted.—Dr. G. F. Buchan maintained that Dr. Milne's treatment was no treatment at all, yet his results appeared to be the same as those of Dr. Peters, who practised strict asepsis with abundant fresh air.—Mr. T. W. N. Barlow said that he had tried Dr. Milne's treatment thoroughly for four years, but he got return cases and cross infections as frequently as ever.—The President referred to the enormous demand which aseptic treatment made on the nursing staff, and spoke of the great value of the use of gloves. He pointed to the possibility of there being some change in the organism of scarlet fever which was producing lessening virulence of infection.

GUY'S HOSPITAL: LECTURES ON INDUSTRIAL DISEASES.—The following is the syllabus of the six lectures on Industrial Medicine to be delivered at the Medical School of Guy's Hospital by Dr. Frank Shufflebotham during May and June:—Lecture I., May 8th: The Symptoms and Diagnosis of Lead Poisoning. Lecture II., May 15th: The Post-mortem Appearances associated with Lead Poisoning. Lecture III., May 22nd: Miners' Nystagmus, with a demonstration on living cases. Lecture IV., May 29th: Industrial Fibroid Lung. Lecture V., June 5th: Anthrax. Lecture VI., June 12th: The Medical Aspect of the Workmen's Compensation Act. The lectures will be given on Friday afternoons at 4 P.M. in the pathological theatre.

VICTORIA HOSPITAL, BURNLEY.—A proposal to increase the number of beds in the Victoria Hospital, Burnley, has prompted Dr. John Brown, now of South Africa, to write an interesting letter which appeared in the *Burnley Express* on April 25th. Dr. Brown, who at one time resided in Burnley, identified himself with many movements in that town which had for their object the betterment of the poor and among these movements was the building of the Victoria Hospital, which for the past 28 years has ministered to the medical needs of the town and district. The Victoria Hospital adopted the circular ward system, and so successful has this system proved, that the "Victoria Hospital wards," writes Dr. Brown, "are an example to the whole world as to the best manner of heating and ventilating, and in providing the largest possible floor space in the least expensive manner"; and he suggests an additional storey to the present building as the best means of providing space for new beds. That the board of management have a difficult financial problem to consider is also recognised by Dr. Brown, when he says: "In the present unprecedented deplorable state of the cotton trade in Lancashire, with its very gloomy outlook for the future, your hospital extension must be conducted in the cheapest possible manner." Dr. Brown discusses the financial aspect of the question, and argues that an additional storey, for which the building is structurally suitable, would be better in every respect than the erection of new detached buildings. The letter, which is virtually a plea for, and an appreciation of, the circular system of hospital wards, will be read with interest by everyone concerned with the building of hospitals, and should receive the careful attention of the board of management of the Victoria Hospital, considering the personality of its writer.

Reviews and Notices of Books.

Theorie und Praxis der Inneren Medizin.

Von Dr. E. KINDBORG. Band III. With 71 illustrations. Berlin: S. Karger. 1914. Pp. xiv. + 752. Price 13 marks.

WE welcome the appearance of the third and last volume of Dr. Kindborg's text-book of internal medicine, which is designed for the use of practitioners and students of medicine. The diseases of the kidneys, blood, and nervous system are considered at full length in the greater part of the volume; the last 100 pages are devoted to the general infections and the chief acute and chronic poisonings, both receiving rather short shrift, as though for lack of space. The author's style is good, and his writing makes easy reading. The text is not overburdened with facts and figures, percentages and proportions, correlations between physical signs and post-mortem observations, and it does not contain a vast amount of detail in the sections devoted to treatment. The book is clearly not meant for the student who has examinations to pass, nor is it a bedside manual, if such an expression may be allowed, nor the sort of book to refer to when an obscure case has to be diagnosed. Dr. Kindborg writes spaciously, viewing the disorders he describes from a philosophical and physiological standpoint, dealing in general considerations rather than in the particulars of disease; he is at pains to show how physiological conditions may pass on into pathological, and gives impressionist pictures rather than detailed presentments throughout. Matters are brought rather more to a focus in the tables scattered throughout the text, but these, too, are lacking in the definiteness and dogma that one is accustomed to find in medical text-books.

Without doubt there are many medical men who will read Dr. Kindborg's volumes with pleasure and profit, particularly physicians of a contemplative rather than an active or operative cast of mind. To the pure practising physician it will not appeal to warmly, in spite of its many excellencies.

Practical Sanitation.

A Handbook for Health Officers. By FLETCHER GARDNER, M.D., Captain, Medical Corps, Indiana National Guard, and J. P. SIMONDS, B.A., M.D., Professor of Preventive Medicine, University of Texas. London: Henry Kimpton. 1914. Pp. 403. Price 18*s.* net.

THE authors state that their object has been to provide within the covers of a single moderately priced volume a plain, non-technical exposition of the duties of the health officer, and to provide him with a safe way of meeting any emergency which may arise. The work deals first with individual diseases and groups of diseases under the heading of "Epidemiology," next with various questions of general sanitation and sanitary organisation, and concludes with a brief summary of some principal laboratory methods. The volume is well illustrated and clearly printed, though curiously heavy for its size.

On the whole the authors have succeeded creditably in the task which they imposed upon themselves. The successive chapters are full of well-ordered information authoritatively or even didactically stated, and the information given is generally of the kind most needed for rapid reference by those who wish to know the outstanding

facts of different epidemiological and public health matters. For sanitary work in this country the ground is already largely covered by more than one well-known English text-book, which have the advantage of dealing with English administrative conditions; but there are various matters, such as the chapters on rat destruction and the schedule for sanitary surveys of cities, on which this book will be found a useful addition to English libraries of public health, while it should be particularly serviceable to medical men practising in the colonies or abroad and away from general and special text-books of public health.

A few criticisms may be called for. The need for "a sanitary survey of the source" of a water-supply is mentioned, but by no means sufficiently insisted upon; a health officer often needs no support whatever from the laboratory work, on which much stress is here laid, to condemn a water to which polluting matters obviously can gain access. The absence of any sufficient account of the common forms of food poisoning seems a serious omission. The statements made on the matter of incubation periods might have been more explicit: thus the incubation of enteric fever is given vaguely as "one to two or more weeks"; and that from measles as "from 7 to 18 days, oftenest 14," without specifying whether the 14 refers to the initial symptoms or to the occurrence of the rash. The maximum incubation period of whooping-cough is generally held to be longer than ten days, and an obvious error has crept into the table on p. 81 which makes the incubation of scarlet fever "usually 14 days." The statement that the rash of small-pox usually makes its appearance on the fourth day of illness is contrary to general experience; exceptionally the rash may be delayed as long as this, but the rule is certainly the second or at most the third day.

A Treatise on the Diseases of Women, for Students and Practitioners

By PALMER FINDLEY, B.S., M.D., Professor of Gynæcology, College of Medicine, State University of Nebraska. London: Baillière, Tindall, and Cox. 1914. Pp. 954. Price 30*s.* net.

THIS book has grown out of the author's "Diagnosis of Diseases of Women." Much that was contained in the former work has been revised, the subjects have been rearranged, and more than an equal amount of text and illustrations has been added for the purpose of making a complete text-book on the subject of the diseases of women. The result is a bulky volume of some 950 pages and 632 engravings, with 38 plates in colours and monochrome.

A feature of the work is the large amount of space devoted to non-operative methods of treatment, such as douches, baths, exercise, massage, diet, dress, and tampons. Dr. Findley thinks that the non-operative methods of treatment of diseases of women have not received their due share of consideration in text-books and in practice. A great deal of this information is extremely useful; it is, however, a pity that the author should have included an account of pelvic massage, more particularly as this therapeutic measure finds little favour in America, while the mode of treatment, we imagined, had to a large extent been given up, even abroad, where at one time, as the author says, it was much practised. The date upon the title-page of this work is 1914, and it is therefore disappointing to find so little said as to the treatment of cases of fibromyomata by X rays.

Dr. Findley is not very enthusiastic on the merits of the extended abdominal operation for cancer of the cervix. At the same time, no doubt unwittingly, he misrepresents the present views of Wertheim. This operator does not attempt to remove the glands unless they are enlarged, and so far from the statement being true that in every case in which the removed glands were found the seat of metastasis there was recurrence, Wertheim has published no less than 14 cases in which the glands were involved at the time of operation and in which the patients were alive and well at the end of five years; and so long ago as 1911, in the record of his first 500 cases, he pointed out that the removal of all the glands is generally not possible and usually not necessary, for even at that date he had five patients, in whom the glands were involved, alive and free from recurrence five years after the operation. It is a pity that the operation of vaginal hysterectomy combined with bisection of the uterus should be illustrated in the section on carcinoma of the uterus, precisely the condition in which this method is unjustifiable.

We must not be thought from these criticisms to be of the opinion that this book is not a useful one. It contains a great deal of information, but there is a want of arrangement and an amount of repetition which detract from its usefulness, and which it would be easy to correct in any future edition. Personally, we are of opinion that a very complete account of the diseases peculiar to women could be given in a book of much less than nearly 1000 pages without anything of importance being omitted, and it is disappointing to find so much that is of value hidden among a large amount of information often of little moment. Dr. Findley's book on the "Diagnosis of Diseases of Women" was of such merit that we are disappointed to find this much more important work of less than equal worth. There are a very large number of mistakes in the spelling of proper names, such as Priestly, Schaffer, Fraub, Prochowick, Granger and Stewart, for Grainger Stewart, Leipmann, and many others. Many of the illustrations are good, and the index is a full one.

Practical Pathology, including Morbid Anatomy and Post-mortem Technique.

By JAMES MILLER, M.D. Edin., F.R.C.P. Edin., Lecturer on Pathology and Bacteriology, School of Medicine of the Royal Colleges, Edinburgh; Pathologist, Royal Victoria Hospital, Edinburgh. With 112 illustrations. London: A. and C. Black. 1914. Pp. 444. Price 7*s.* 6*d.*

THIS is essentially a student's book, and one that we can cordially recommend.

The early chapters are concerned with the equipment of the pathologist and the method of removing the various organs, &c., for systematic examination; these, together with the last chapter on necropsies conducted from the medico-legal point of view (of somewhat limited scope, since the procedure adopted in Scotland is alone dealt with adequately), and an appendix on microscopical and bacteriological methods, comprise the strictly practical portions of the volume. Ten other chapters are devoted to diseases of the various organs and structures, and one to a consideration of tumours in general. In this section of the work all the common pathological conditions are included. Each organ is taken in turn; the diseases likely to affect it are indicated, often in tabular form, the lesions are clearly

described as to their naked-eye appearances, and, finally, a synopsis of the associated microscopical changes is given. All the descriptions are arranged in an orderly manner, and although brief are sufficiently comprehensive, and there is a refreshing absence of those minute details which render many of the manuals of similar scope so perplexing and so unsuited to all but the expert pathologist.

Following the illustration of the value of bacteriological investigations quoted on the second page of the book in connexion with the case of woolsorter's disease, we hoped to find this important matter insisted upon at every stage of the post-mortem examination, and the possible but often unsuspected infections noted in connexion with each organ, and we were correspondingly disappointed to find these matters relegated to an appendix in which they lose much of their effectiveness.

Some tables of weights and sizes of normal organs and structures might well have been included, as also some details of the methods and possibilities of extended inquiry when only restricted post-mortem examinations can be obtained. These shortcomings, however, are not sufficient to detract from the merits of the work.

Grundzüge für die Ernährung von Zuckerkranken nebst praktischen Anweisungen für die Diabetes Küche (nach weiland Dr. Gilbert's Diabetes Küche).

Von Professor Dr. ALBERT ALBU. Halle a.S.: Carl Marhold. Pp. 163. Price 4 marks.

ALTHOUGH based upon a book by Dr. Gilbert, giving directions for preparing and cooking food for diabetics, this book has a larger scope, and treats of the diet in this disease, both from the scientific and practical points of view.

It consists of five parts, the first of which is devoted to the principles concerned in the ordering of diets for diabetic patients. Diets are given in detail for the working out of the tolerance of the patient for carbohydrate and for the increase of his power in this respect, illustrative cases being quoted. Then special diets, such as the oatmeal, rice, potato, and vegetarian diets, are described and discussed.

The second part consists of tables of food materials, including those strictly forbidden, those allowed in definite quantities, and those permitted without stint. In the third part a careful description is given of special foods for diabetics. The difficulty of preparing a bread substitute at once palatable and of a character to satisfy the craving of the patients for bread is specially emphasised. The various meals, flours, cakes, and other preparations designed for the special use of diabetics are referred to, and the names and addresses of the makers are usually given. The fourth part contains some general observations upon prophylaxis and prognosis in diabetes.

The fifth part comprises nearly two-thirds of the book, and consists of directions for the preparation and cooking of dishes for diabetic patients. Instructions are given in detail for the making of hors d'œuvres, soups, and entrées, for the choice and cooking of fish and meat dishes, for the preparation of sauces, vegetables, edible fungi, jellies, salads, sweets, ices, and drinks. In every instance the directions given are explicit and sufficient.

The book is small and inexpensive, and it is systematic and easy of reference. It supplies a distinct want, and we can cordially commend it to our readers as both interesting and useful.

Kurzer Leitfaden der Psychiatrie.

Von Dr. Ph. JOLLY. Bonn: A. Marcus and E. Weber. 1914. Pp. 240. Price 4 marks.

To abstract satisfactorily psychiatrical conceptions is extraordinarily difficult, and the compendia and handbooks which result from attempts in this direction are very apt to stereotype in the mind of the student, even if he understands them at all, notions of insanity which he will be puzzled to coördinate with the cases he may meet in practice. Such works nevertheless have a value for examination purposes, and may be used to supplement and amplify lecture notes, while they may further serve the busy practitioner in good stead in the labelling of groups of symptoms. In the book before us we have a short recapitulation of general and special psychiatry in which almost everything seems to have been touched upon and with as much lucidity as space has permitted. The grouping of symptoms follows the current vogue, and would appear to be based upon the classification of Kraepelin.

The work is, we should think, quite likely to be of use to students and practitioners of German-speaking countries.

LIBRARY TABLE.

The Practitioner's Practical Prescriber. By D. M. MACDONALD, M.D. Aberd., Medical Officer of Health, Leven, Fife. London: Henry Frowde. 1913. Pp. 198. Price 5s.—This book is intended as a pocket formulary containing numerous hints and suggestions in regard to symptomatic treatment. In the first part diseases are considered in alphabetical order, and the treatment of each malady is briefly described, while the procedures recommended are trustworthy. For closer study naturally the larger text-books should be consulted. Diet tables, receipts for preparing invalid foods, and a short description of spas and climates suitable for certain affections are included. The few lines on "Tuberculin in Daily Practice" are to be regretted, and it would have been better to omit them altogether. Considerable experience is necessary for the proper administration of this remedy, and the suggestions here given are valueless. The book will be found useful for reference by the general practitioner.

The Transactions of the British Proctological Society for the Year 1913, with a List of Officers, &c. Edited by W. S. HANDLEY. London: Published for the Society by H. K. Lewis. 1914. Pp. 30. Price 2s. 6d. net.—This is perhaps the most exiguous volume of transactions ever published by any society. The prefatory note, however, explains the reason. The society was formed on Dec. 11th, 1912, and in July, 1913, it accepted the invitation of the Royal Society of Medicine to become a subsection of its Surgical Section. From that date on, therefore, the Proceedings of the society are continued in the Transactions of the Royal Society of Medicine. The present Transactions are of the same *format* and type, so that they will form one volume with their continuation from the Transactions of the Royal Society of Medicine. They contain the presidential address of Mr. Swinford Edwards, and papers on Four Cases of

Strangulated Hernia after Abdomino-Perineal Excision of Rectum, by C. Gordon Watson; X Ray Enemata in Diagnosis of Strictures of the Large Intestine, by Hamilton Drummond; Combined Excision of Carcinoma of Rectum Five Weeks after Operation, by W. Sampson Handley; Case of Kraske's Excision of Rectum followed by Two Ovariotomies, by Swinford Edwards; Secondary Growth in the Perianal Skin and Cellular Tissues Three Years after the Abdomino-Perineal Operation, by W. Ernest Miles; Adeno-Carcinomatous Tumour Primary in the Perianal Skin, by W. Ernest Miles; and a Case of Columnar-celled Carcinoma Arising in Track of a Fistula in Ano, by C. Gordon Watson.

Modern Problems of Biology. Lectures delivered at the University of Jena, December, 1912. By CHARLES SEDGWICK MINOT,, LL.D., D.Sc., Director of the Anatomical Laboratories, Harvard Medical School. With 53 illustrations. Philadelphia: P. Blakiston's Son and Co. 1913. Pp. 124. Price $1.25 net.—These lectures, six in all, were written and published in German. In reviewing the German version in THE LANCET of May 24th, 1913, p. 1461, we stated that the author presented a very readable, instructive, and critical account of the subject, and we most heartily welcome the appearance in English of Dr. Minot's views on "immortality," death, sex, life, and the like, as set forth in these interesting lectures.

Les Nouveaux Horizons de la Science: La Matière Vivante, sa Chimie, sa Morphologie. Par H. GUILLEMINOT, Chef des Travaux de Physique Biologique à la Faculté de Médecine, Paris. Paris: G. Steinheil. 1914. Pp. 430. Price 6 francs.—It would appear that this is the third volume of the author's exposition of "The New Horizons of Science." Volumes I. and II. we have not seen. More than one-half of the text is taken up with a general and readable account of elementary and leading facts in organic chemistry, thermodynamics and other physical problems, catalysis and various chemical reactions. Book II. gives a similar account of the forms of living matter. Little is said about the functional aspects of the question. There does not appear to us to be anything very new or striking in the exposition of "The New Horizons of Science," at least to medical readers.

JOURNALS AND MAGAZINES.

The Interstate Medical Journal. Special Tuberculosis Number. Vol. XXI. March, 1914. No. 3. St. Louis: The International Medical Journal Company. Subscription 10*s.* per annum, post free.—This is the first of two special numbers of the journal to be devoted to tuberculosis. The range of subject considered is so wide, and the specialisation of knowledge so minute, that no reader could fail to be impressed by the obvious gain of ground in the present day attack on the disease, though many will share the opinion openly expressed by several contributors that the optimistic statements of some British officials and politicians, which are fashionable at the moment, are erroneous and indiscreet. The articles fall chiefly under the headings of surgical treatment and chemiotherapy, though other aspects of the subject are reviewed. Professor Tuffier, of Paris, has a contribution indicating the value of the production of artificial pneumothorax for the immobilisation of excavated lung. The principle of artificial pneumothorax has been ascribed to Potain (1888), but Carson, of Liverpool, had advanced it in 1821, and it had been tentatively adopted by the late Mr. R. W. Parker, in London, years before that date. The technique has changed from the original injection of nitrogen or sterile air to operation by free opening and packing with fat grafts, Beck's bismuth paste, vaseline, and other materials. Kreuscher has been carrying out in J. B. Murphy's clinic a large series of injections of the pleural cavity with nitrogen, and the results have been very gratifying. The paper by Murphy and Kreuscher dealing with their technique is important and convincing. A short article by Carl Beck, of Chicago, on the bismuth paste treatment of sinuses can be strongly commended. The process is so simple that its use could be widely extended in ordinary practice. The value in "surgical" tuberculosis of sea air and sea water baths has long been recognised. Begun at Margate a century ago, the system of such marine hospitals spread in Italy in the "sixties." Only recently has it become apparent that sunlight is an important factor in these cures, and "heliotherapy," the continued use of direct sunlight on the naked body, is finding an increasing vogue for tuberculous joints and bones. It is obviously limited in geographical extent, as yet chiefly to the higher Swiss Alps and the shores of the Adriatic. Excellent results are secured at Leysin, above the Rhone Valley, in the sanatoria controlled by Dr. Rollier, and on the Lido, where efforts are being steadily pushed to lessen the appalling mass of tuberculous joints, which strikes every observant surgeon who visits Venice. It is noticeable in this review of American practice how little space is devoted to tuberculin, clearly because its employment is assumed. In the opinion of Dr. E. E. Myers, of New York, the value of the Piorkowski turtle tuberculin has been maintained on the ground of the slight reaction which it produces. An interesting note on the effects of infinitesimal doses of pure tuberculin ("endotin") in advanced cases comes from the pen of Dr. M. Solis Cohen, of Philadelphia. In all these cases the reagent was given by the mouth. Difficult as it is to award the palm to any one article of those before us, perhaps it should crown the essay emanating from the Sprague Institute of Chicago, inspired by Dr. H. Gideon Wells. The work of Ehrlich and his lieutenants has been so decisive that attempts to follow their lead must be made in the case of tubercle. But there is a basal difference in the discovery of a synthetic purifying poison in the three infections of syphilis, malaria, and tubercle, in that the two former are, at least in their early stages, infections of the blood and fluid tissues, whereas the tubercle bacillus tends very early to be shut off in the "tubercle" itself. Experimental work is complicated by two factors, one the non-vascularity of the tubercle, the other the impermeable structure of the tubercle bacillus itself, for it contains a large proportion of waxy and fatty material. Dr. Wells has therefore planned and carried out a preliminary and systematic investigation into the method of absorption by tuberculous tissues of various bodies, notably the iodine compounds, while lines of study are being followed by Miss Sherman and others in the dyes which affect fatty bodies. Suggested elements which are likely to provide effectively remedial salts are copper and gold. The quinine compounds, especially ethyl-hydrocuprein, employed by Morgenroth, one of Professor Ehrlich's assistants, have given good curative and better prophylactic effects in tuberculous mice, but the scope of employment as applied to human subjects has been scanty and disappointing, while in three instances out of 23 a severe but transient amblyopia has followed the injections. There are several curious articles on the psychic changes wrought by absorption of tuberculous products, of which the most remarkable is a short study of the mental attributes of Francis Thompson, the unfortunate author of "The City of Dreadful Night," attributes which contrast strongly with the phrase first used by a great American writer years ago, the "tubercular virtues."

Jahreskurse für Aerztliche Fortbildung. Munich: Lehmann. Subscription price, 18 marks.—The issue for February includes the following. Professor Hoffmann writes a review of recent study on the pulse, the effect of variations in age, respiration, and pathological states, and the various means of obtaining records, including, besides the older and well-known instruments, the sphygmobolometer of Sahli, a figure of which is given. This consists of a mercury manometer, an air manometer, and a rubber ball, all capable of inflation by a syringe, and by its means the volume of the pulse as well as the blood pressure can be measured. (The instrument is made by Buchi and Son, Berne.) The value of pulse records in diagnosis and treatment is also considered. The same writer furnishes an article on digitalis therapy, with some discussion of the numerous preparations of the drug now on the market. The

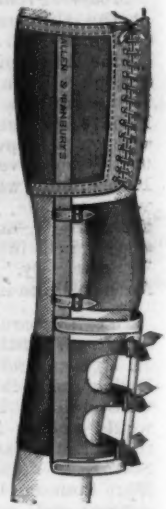
indications and contraindications are also mentioned.—Professor Staehelin writes on the various forms of cough and their diagnostic significance, pointing out how the character of the cough may be a guide to the diagnosis of its cause. He then proceeds to discuss the treatment by expectorants, sedatives, and other drugs. A general review follows, giving a few lines to each of the numerous publications of the past year or two in Germany dealing with diseases of circulation and respiration.—The March number opens with a discussion of the significance of ulceration and bleeding in the alimentary canal associated with diseases of the heart and arteries, by Professor Fleiner. Simple or malignant endocarditis, arterio-sclerosis, or syphilitic aortitis may all be causes of bowel hæmorrhage by giving rise to embolism or thrombosis, and illustrative cases are described in which gastric or duodenal ulceration was due to this.—Professor Jacoby gives some account of Abderhalden's methods of blood examination for the diagnosis of pregnancy, and Professor Schade describes the application of the methods of physico-chemical analysis to the blood serum; in particular the measurement of the quantity of free H or OH ions by electrical and other methods, which is of value, for instance, in the study of acidosis. The viscosity of the blood may also be measured by the apparatus figured and described; it is raised by work, venosity, and inflammatory processes, and falls in anæmia.—Professor Erich Meyer writes on the anæmias in general and pernicious anæmia in particular, passing in review the blood-picture and pathology and the newer methods of treatment, such as the salvarsan preparations, thorium rays, X rays, and other therapeutic agents.

The Military Surgeon. Published monthly by the Association of Military Surgeons of the U.S.A. Editor: S. C. STANTON, Brigadier-General. Chicago. Price 1*s.* 6*d.* per copy; 15*s.* per annum.—The first article of the April number is a warm appreciation by Dr. L. Webster Fox of the operation of Lieutenant-Colonel R. H. Elliot, I.M.S., for chronic glaucoma (THE LANCET, March 21st, p. 808). Dr. Fox in his own operating-room in Philadelphia had had eight cases operated upon by Colonel Elliot during that officer's recent visit to the United States. Dr. Fox expresses the opinion that at the International Medical Congress last August, in the section of ophthalmology, the two men most conspicuous were Professor Lagrange, of Bordeaux, and Colonel Elliot.—Captain Louis H. Schultz had a curious experience once when in charge of a sanatorium. He discharged for misconduct a patient with advanced phthisis (much sputum, many bacilli), but the man turned up again in a few days, this time as a visitor and in the uniform of the United States army. Such a recruit is a great danger to a regiment, so Dr. Schultz proposes to send all recruits for two weeks to a quarantine station for minute examination (X ray examination of chest, Wassermann test, blood counts, &c.), and for observation in case he is incubating an infectious disease. He notes that cases of early phthisis generally show deficient expansion, thus bearing witness to the sagacity of the British Army Medical Department which lays stress on just this measurement.—Captain Schmitter, in charge of a leper hospital at Manila, gives reasons for his belief that leprosy may be a symbiosis of the bacillus lepræ with the treponemata of syphilis or yaws.—Lieutenant W. B. Meister tells of a new danger to the United States army—cocainism. The pure crystals are taken as snuff; about ½ grain eight times repeated produces the desired "dream." A patient becomes facile, loses reliability, promptness, and punctuality, is unfit for sustained exertion, and falls out even from a short practice march. There is a sign; the nares are apt to be blanched immediately after a dose, but congested and swollen later. Treatment is of no lasting avail. This drug habit is assuredly causing much trouble in North America.—Lieutenant-Colonel Jacob Frank, of Chicago, Surgeon-General of the Illinois National Guard, recommends a new first aid for wounds of the abdomen, as the outcome of interesting observations in civil practice, and many experiments on dogs. He desires that no penetrating wound of the abdomen shall be treated by putting the first field dressing over it, to dam back the intestinal leakage and force it to infect the whole peritoneal cavity. On the contrary, he wishes everyone taught to push a little of the first-aid packets gauze into the wound with a stick (a match for example) to serve as a drain and so give the peritoneum a chance to remain clean. An important paper all should read.—There is an editorial on the work of the United States Public Health Service, giving it deserved credit for awakening a sanitary conscience in the various States, and asking for it stronger financial support so that it can increase its usefulness. We observe that a surgeon has been detailed to give two lectures on tuberculosis to the Farmers' Conference at Savannah, Georgia, at the request of the Georgia State Agricultural College.

New Inventions.

AN EXTENSOR KNEE SPLINT.

I HAVE described elsewhere[1] an apparatus for the reduction of flexural deformities at the knee-joint when actual bony ankylosis is not present. After the reduction of such deformities or in the course of the disease which tends to produce them a knee splint with a slight extensor action is required. The illustration here reproduced shows such an apparatus. I have used it chiefly in some period of the treatment of cases of tuberculous knee. It consists of a leather sheath which is laced on to the thigh; from this two lateral steel struts extend directly downward to a level just above the ankle. These two side steels are united across the front of the leg by two U-shaped arches. The vertices of the arches are united by a metal bridge, and over this is buckled an elastic sling which passes behind the leg. In accordance with the tension on the elastic sling the extensor action at the knee-joint can be modified. A soft leather cap passes from the side irons across the front of the knee to take the backward pull. The splint is kept in place by means of a strap attached to a pelvic band or passing over the opposite shoulder. The apparatus can also be applied as an integral part of a hip-splint. The thigh piece should fit with accuracy, and care must be taken that the knee-cap bears evenly over the patella.



The apparatus has been made for me by Messrs. Allen and Hanburys, Wigmore-street, London, W.

C. MAX PAGE, M.S. Lond., F.R.C.S. Eng.

Welbeck-street, W.

[1] Proceedings of the Royal Society of Medicine, Surgical Section, January, 1914, p. 113.

AFTER-CARE ASSOCIATION.—The annual report of the council of this association for the year 1913 shows that applications on behalf of 377 persons were received, of whom 228 were women and 149 men. Of the total number of cases 106 were from the London county asylums, 197 from other county and borough asylums, 18 from mental hospitals and licensed houses, and 56 from various institutions or from private sources. Of these, 119 had been assisted in various ways during previous years and 258 were first applications. The important work of assisting poor persons discharged recovered from asylums for the insane is now being extended by helping cases discharged on trial. During the past year 11 such cases have been satisfactorily dealt with, but the extension of work considerably adds to the financial burdens of an association which is doing good work and which therefore deserves support and encouragement. It is the only charity of its kind in the United Kingdom, and cases are assisted from all parts of the country. Although, owing to legacies, the total receipts have increased, the annual subscriptions and donations have decreased, and new contributions are urgently needed. An annual subscription of 5*s.* constitutes the subscriber an ordinary member, while a single gift of £5 makes a life member. The address of the Association is Church House, Dean's-yard, Westminster, S.W., and the bankers are the Union of London and Smith's Banks Victoria-street branch), Westminster.

THE LANCET.

LONDON: SATURDAY, MAY 2, 1914.

Reform of the Public Health Service.

ONE of the most urgent matters which must engage the attention of Mr. HERBERT SAMUEL as President of the Local Government Board is the question of reforms in the administration of the Public Health laws. The administrative machinery was designed, much of it, 50 years ago, and it can hardly be said to have been really overhauled in any effective manner. The Local Government Board with its limited and ineffectual compulsory powers is the central public health authority, and it is still left to local sanitary authorities to decide whether or not the various Public Health and Housing Acts shall be carried out. It is true that the creation of county councils in 1888 brought into existence an authority with executive powers which could be used in case of default by the district councils, but these powers have been only rarely exercised. County Councils undertake public health duties specifically given to them with excellent results, but they are rightly reluctant to coerce other authorities in matters for which the county has no primary responsibility. While the administrative machinery has remained unaltered for half a century, the claims upon it have been increased to so great an extent that it is quite right to inquire whether the time has not arrived when suitable modifications and adjustments should be made in order to enable it to fulfil the requirements of the present day.

If the position of the medical officer of health to-day is compared with that of 50 years ago it will be recognised that his work and responsibilities have been very considerably enlarged. The Royal Sanitary Commission suggested in 1871 that the principal duties of a medical officer of health should be to study and report to the central office as well as to his own local authority, and this with dispatch, all things relating to considerable changes in the health of his district, and to collect from certain sources material which might be combined with his own observations in general reports on the health of the district, together with his recommendations. It was evidently intended by the Commissioners that the medical officer of health should be essentially an advisory officer and that he should have few executive duties; indeed, it was recommended by them that he should obtain at the offices of the local authority assistance in the clerical work entailed in making his reports and statistical returns. It is expected, however, to-day that the medical officer of health should be the executive head of a public health department, and he has not only to advise what steps should be taken to carry out the Public Health Acts, but he is responsible for the taking of those steps. These executive duties have very considerably altered the position of the medical officer of health in relation to the local authority. As an advisory officer and nothing more he made general recommendations as to water-supplies, drainage schemes, the adoption of by-laws or regulations, and similar matters, and his recommendations were addressed to the authority as a body. But as an executive officer he has to deal with individuals who may be property owners, dairymen, butchers, or other tradesmen. These again are frequently members of the local authority, and they resent having to carry out the requirements of an official whom they look upon as their servant, and who holds office only as long as he receives their support. This being so, it is of the utmost importance that the medical officer of health should not be dependent upon the members of local authorities for his continuance in office, or solely dependent on them to get the increase of salary which is necessary if the new executive duties are to be carried out.

The Royal Commission to which reference has already been made was quite alive to the necessity for securing the independence of the medical officer of health, even though his duties were to be mainly advisory, for it made the definite recommendation that in order that medical officers of health might be able to discharge their duties without fear of personal loss they should not be removable from office by any local authority, except with the sanction of the central authority. This recommendation has been endorsed over and over again by other Commissions and Government Committees. In the first volume of the Land Inquiry Committee, which was issued last year, it is stated that one of the consequences of the insecurity of tenure of medical officers of health in rural districts is that they are often afraid of offending district councillors and the better-class inhabitants who are the owners of property. In justice to medical officers of health it should be said that they frequently take the indicated risk, but it is not fair that they should be asked to do so. The very precise statement is made by the Land Inquiry Committee that the Housing Acts will not be properly enforced until medical officers of health obtain a greater security of tenure. The committee makes a similar reference in the more recently issued second volume which relates to urban districts, and recommends that except in cases of gross misconduct a local authority should be obliged to obtain the sanction of the Local Government Board before dismissing a medical officer of health or sanitary inspector, and that the payment of adequate salaries to those officers, in accordance with a schedule to be provided by the central authority, should be made a statutory obligation upon local authorities. When

the Housing and Town Planning Bill, 1909, was before Parliament opportunity was taken to obtain for county medical officers of health security of tenure of office, subject to approval by the Local Government Board, and as there is a probability of a Government Bill with respect to housing in rural districts being introduced in the present session it is to be hoped that advantage will be taken of this measure to give a similar security to all medical officers of health, and to prevent them from being starved by inches as the result of Government departments continually multiplying their duties without increasing the pay of their office.

Art and Medicine.

THE artist of all sorts—painter, sculptor, engraver, and jeweller—has portrayed medical events in the manner dictated by his respective calling and has done so from very early times, for some of our most ancient discoveries in sculpture and pottery have borne representations of various pathological conditions. Mr. HASTINGS GILFORD, in one of his recent Hunterian lectures delivered before the Royal College of Surgeons of England,[1] called attention to prehistoric drawings of the human figure displaying various physiological and pathological conditions; and one of these outline sketches from the rock sculptures in the Dordogne was at least 15,000 to 20,000 years old in the opinion of experts. There is one remarkably different result for us of to-day from the labours of the artist, contrasted with the result derived from the writings of numerous authors who have described medical events in general literature. It is this. The artificers have very usually shed definite light on medicine, while the chroniclers, poets, and dramatists, though dealing freely with medical topics, have not been as distinctly informatory. Written descriptions of diseases occurring in general literature in great measure leave doubtful diagnoses for the reader to choose between; pictorial representations have often been equivalent to accurate naming of the conditions. Historians have touched upon epidemics in accounting for the social and political conditions of the nations in whom they are concerned, but as often as not it remains a matter of doubtful inference from their words under what particular pest the people were supposed to be abiding. Malaria appears to have been described in classic Greek literature, and in the Bible there are accounts of some epidemics the nature of which we can identify. But there are other pestilences which conform equally to any of two or three diseases, and leave the searcher for accuracy considerably puzzled. The epidemic to appear in most obvious guise upon the stage of history is plague, but it is quite likely that many chroniclers have confused leprosy with it and with syphilis. What, again, was the English Sweat? Although the great Caius wrote a "Boke or Conseill against the disease commonly called the Sweate or Sweatyng Sicknesse," we do not obtain a description from which a diagnosis can be made for certain, and with some doubt decide to think that this mysterious illness was influenza.[2]

Of course, medicine has a very definite literature of its own, in which it has been for many generations the mission and pleasure of learned men to describe the origins, course, and therapeutics of disease. Of this learning enshrined for the information of scientific men generally, or of practitioners of medicine in particular, much is splendidly written, nor do such books lack what for purpose of definition has been described as the essential principle of literature—namely, universal appeal. All are interested in their teachings, though expert intervention is required to transmute the theories into practice. The most authoritative of these books belong to the class which DE QUINCEY called "the literature of knowledge" as distinguished from "the literature of power," for each of them must remain upon trial for ever: "Let its teaching be even partially refuted," said DE QUINCEY, "let it be expanded, nay, even let the teaching be placed in a better order, and instantly it is superseded." In the literature of medicine proper there are word pictures of disease every whit as accurate as brush, pencil, or chisel could make them, but these descriptions cannot be detached from the treatises in which they occur, and the significance of the symptoms detailed has altered and keeps altering with our progress in pathological learning, until the value of the words employed grows less and less. The great SYDENHAM omitted to mention sore-throat as a symptom of scarlet fever; other descriptions, laying more stress upon inflammation of the pharynx or larynx, were possibly accounts of diphtheria, whether called scarlet fever, "confluent measles" or "putrid sore-throat." The artist seldom produces similar confusion: in such diseases and deformities as he represents he usually gives the salient features in such a way that no one can fail to diagnose the condition intended. RUBENS saw a girl in a hysterical paroxysm, and once and for all has revealed to us what was the real meaning of the cases of demoniac possession which were a marked feature of mediæval life. Nothing that ever can happen in the development of medicine will alter the truth told in the famous picture of St. Ignatius's miracle, while we know from the portraits of dwarfs, in which VELASQUEZ revelled, the types of infantilism which were prevalent in the seventeenth century. Dr. PAUL RICHER in his excellent book, "L'Art et la Médecine," gives many reproductions of pictures and sculpture showing how faithful artists have been in their delineation of such diseases as leprosy, syphilis, plague, and rickets. Historians have described these conditions with pains, and medical

[1] THE LANCET, March 7th, 1914, p. 668.

[2] W. H. Hamer: The Milroy Lectures on Epidemic Disease in England, THE LANCET, March 3rd, 1906.

literature has referred to them with particularity, but in the written accounts stress is so easily laid upon other than essential things that for the purposes of diagnosis the artist generally gives us the larger help.

There is a pictorial art associated with medicine; the allusion is to the illustrations, often beautiful as well as accurate, which accompany treatises on anatomy, physiology, and medicine, and to the charts, maps, and pictorial diagrams intended to be hung in lecture halls for the instruction of students and the assistance of teachers. To this category of artistic productions belong many admirable albums illustrating surface lesions, many adroit wax models, and some large oil paintings of strictly pathological conditions. We reproduced recently in the columns of THE LANCET[1] some famous panels of this sort by JACQUES GAUTIER D'AGOTY. The anatomical exactness was here accompanied with beautiful drawing and painting. But the help in the recognition of symptoms that medicine has received from bygone art will not be continued to our successors in the same way. Photography and its mechanical reproductions, colour printing, and the cinematograph have entirely removed such paintings from the sphere of practical utility; while the pathological subject is in the nature of things not likely to be the pre-eminent favourite with great artists that it was in the Middle Ages. To the old masters the Bible and the lives of the saints were the source of inspiration, and representations of pestilences, martyrdoms, and miraculous healings were the ever-recurring themes. To-day the pathological subject is left severely alone. Future generations will learn nothing of disease and nothing of the practice of medicine from the exhibition of the Royal Academy of Arts which is opened to the public this week, and which contains a more than usually interesting number of paintings and sculptured work. Medicine is mainly represented by portraits of medical men, and even here the distinctive marks of their calling are generally absent. A strong and simple portrait of Sir WILLIAM TURNER, by Sir JAMES GUTHRIE, renders the Principal of Edinburgh University in robes with orders on, and the late Sir HUBERT HERKOMER depicts Sir LAUDER BRUNTON very adroitly and sympathetically in something approaching fancy dress: but Professor WILLIAM BULLOCH is shown by Sir LUKE FILDES'S careful and academic brush in the clothes of the man in the street, Sir WILLIAM RICHMOND paints a masterly head of Dr. J. S. HARVEY, where the Rembrandtesque treatment suggests no medical trappings, and Mr. COPNALL'S successful portrait of Dr. H. BRIGGS might be that of any cultivated man. These pictures have no particular message in regard to medicine similar to that which the numerous pictures of soldiers, ecclesiastics, and officials, appropriately garbed, may have for a future generation; or rather they may be considered to give the true message that medical priestcraft has no longer any existence.

[1] THE LANCET, Feb. 21st, 1914, p. 557.

Annotations.

"Ne quid nimis."

THE STATUS OF MENTAL NURSES.

THE spectacular character of the vast advances in surgery during the past half century could not fail to lead to a general recognition of them. The less spectacular but also very great advance in medical science is, if less generally, also realised. And with the realisation of this progress has naturally come about also a comprehension of the importance of the part played by nursing in the relief of suffering, and consequently an appreciation of the necessity for adequate training for nurses, and of what is due in the way of enhanced status and remuneration for the exacting but beneficent duties of the nurse. There is one division of medicine, however, in which the progress made is taken too much as a matter of course by a people who can hardly remember the conditions previous to the reorganisation of our therapeutics. We refer to the changed conceptions of mental disorders and the changed methods of dealing with them that are the consequence thereof. It is now so fully recognised that these disorders are as truly diseases as any whose seat of origin in the physical organism is clearly recognisable, that we do not realise that the insane were once confined in strait waistcoats, in dark cells bedded only with straw, flogged to subdue maniacal excitement, and subjected to the tender mercies of "keepers" often drawn from the dregs of the people. And even yet the public mind is not fully awake to the fact that the nursing of the insane on modern lines requires in the nurses a very high degree of all the personal qualifications and technical training that we have come to regard as indispensable in the general medical and surgical nurse. It is gratifying to learn, therefore, that the Nursing Conference held this week in London set apart a special sitting to discuss the status and work of mental nurses, which have hitherto received very inadequate recognition. In an impressive address Dr. Robert Armstrong-Jones, resident physician to the London County Asylum, Claybury, estimates that there are some 140,000 mentally afflicted persons in England and Wales alone, and that in caring for them some 20,000 persons are engaged, whose duties are the most difficult, as well as the most responsible and trying, that any man or woman may be called on to perform. These duties are often carried on in out-of-the-way and little-known places, and the qualities demanded by them are self-discipline and tact of the highest conceivable degree. The mental nurse, while requiring special education, must have a thoroughly efficient training in general sick nursing also. This will be at once evident when it is realised that last year 14,000 persons died in the asylums of England and Wales from causes representing nearly all the ordinary diseases and conditions met with in general hospitals and private practice—tuberculosis, diseases of all the internal organs and the nervous system, and special conditions connected with the puerperium and lactation, with senility and the climacteric. The mental nurse

may have to prepare for, and assist at, major operations, to nurse typhoid or scarlet fever patients, and to watch the effect and record the result of long-continued administration of special remedies. Moreover, special difficulties occur in consequence of the great liability to bedsores of the bedridden insane, and Dr. Armstrong-Jones rightly says that it is a triumphant testimony to good nursing that at the Claybury Asylum, with an average resident population of 2500 insane persons, there is not now a single case of bedsore, nor has there been one for over a year in the male wards or for several years in the female wards. Dr. Armstrong-Jones commends the scheme of instruction for mental nurses, due to the initiative of the Medico-Psychological Association, which grants a certificate on satisfactory examination after a three years' course of training; this is so far appreciated that most asylum authorities grant a special monetary allowance to its holders. The effort for good training has received every encouragement from the Lunacy Commissioners. Dr. Armstrong-Jones strongly supports the claim for the registration of these certificate holders, which has been previously urged by a Select Committee of the House of Commons, the General Medical Council, and the British Medical Association, and he mentions that it is due to the efforts of Sir William J. Collins, while in Parliament, that workers in asylums are now provided for in their old age. The London County Council, too, has recently raised the rate of remuneration, and most asylum authorities have realised the importance of granting their nurses adequate leave and rest. As the result of his observations in foreign asylums Dr. Armstrong-Jones eulogises the work of religious orders as involving a very lofty ideal, for, he says, if behind the unobtrusive devotion to practical ideal there is a strong force of religious feeling, a driving power exists which cannot be rivalled. The reorganised St. Katharine's Royal Hospital, also, is commencing a crusade of preventive work by the appointment of health visitors, and he very properly expresses the hope that the prevention of mental diseases will be included in the scope of its work by the appointment of asylum nurses.

WORK AS A THERAPEUTIC AGENT.

THE therapeutic use of rest has long been insisted upon in certain acute conditions; the equal value of work, properly adjusted and carefully supervised, in other classes of disease has received less attention. To be sure, graduated labour in tuberculosis has had consideration, and the value of occupation has been generally recognised in mental disturbance. We all know that there is nothing like work, particularly physical exertion, to overcome the "blues" or to distract the mind during great trouble, but there is room for a more general study of the systematic organisation of work as a therapeutic measure for the mentally unsound. From an interesting article in a recent number of *La Semana Medica*[1] on Work as a Therapeutic Means in the Treatment of Mental Diseases, by Dr. Fernando Gorriti, physician to the Colonia Nacional de Alienados, an asylum for the insane, we learn that work, carefully regulated in accordance with the needs of the individual patient, is used as a means of treatment in a large proportion of the cases admitted. The great majority of the patients in the Colonia are drafted into that institution from the vast Hospicio de las Mercedes in Buenos Aires, whose director, Professor Cabred, who is also the founder, organiser, and director of the Colonia, periodically transfers thither such of the patients in the Hospicio as he considers likely to derive therapeutic benefit from systematised work. On arrival at the Colonia the patient's case is carefully considered afresh, his present condition is investigated, and due weight is given to the notes of his case sent on with him from the Hospicio. The work of selection is thus continued, special care being taken to ascertain whether the patient suffers from any delusion likely to make him dangerous to others or to himself, in which case he is drafted to one of the sections in which patients are under constant observation, to be placed there under appropriate medical treatment until fit for work, or, in the opposite event, to remain there indefinitely. Should the patient be considered fit for work, and should it appear from the notes of his case that before his illness he followed some definite occupation—e.g., that of a carpenter, cobbler, tailor, plumber, mason, or what not—he is put to work at it under expert direction. Should he have had no occupation he is, as a rule, put to outdoor work of some kind, such as farming, gardening, care of poultry, cattle, pigs, or sheep. The patients are constantly visited by the physician while at work so that he may note their general progress and regulate the hours of work (which in no case exceed seven per diem) in accordance with individual requirements. Dr. Gorriti speaks in the highest terms of the results of this systematised work in the treatment of insane patients. He enumerates some of the chief benefits of the method as follows: 1. A diminution of agitation and motor excitability with a corresponding improvement in the patients' sleep, which becomes quiet and restful and longer in duration. 2. A postponement in chronic cases or a complete escape from the onset of a condition of total dementia. This Dr. Gorriti ascribes to the beneficial action of the slight intellectual exercise involved in the occupation followed. 3. A return of the power to work, the importance of which, especially when there is added to it a practised acquaintance with some definite occupation, can hardly be overestimated in the case of patients sufficiently recovered to leave the asylum or return to active life.

[1] La Semana Medica, Buenos Aires, Feb. 12th, 1914.

HOAXING AN EDITOR.

ONE of the Berlin daily papers which is antagonistic to scientific medicine and advocates the so-called "natural" methods of treatment, Christian science, antivaccination, and other unorthodox procedures, has lately been the object of an unkind practical joke. A correspondent wrote to the editor to say that at the last Congress of Internal Medicine one of the greatest medical authorities—His Excellency Privy Councillor Professor Dr. von Rutan—had read a paper which caused a very great sensation owing to the fact that the celebrated professor had stated that modern medicine was a humbug, and that all the great discoveries had been made by laymen, such as Pastor Kneipp and Priessnitz, and that he had decided for the future to take no part in the fraudulent pretensions of allopathic medicine to which he had hitherto adhered. The editor of the journal remarked that he had no intention of expressing a decided opinion in reference to a matter regarding which the medical profession was not unanimous, although the views of a man in such a

position as His Excellency Professor Dr. Rutan deserved careful consideration. He only wished to draw attention to the fact that presumably the medical organs had conspired together to exclude any report of that important address which was not found in any medical journal, and that this had been obviously done by order or on behalf of the president of the congress. A kind of terrorism, he said, existed to-day in scientific medicine, and by a common agreement the opinions of opponents of allopathic treatment were never mentioned in the medical journals, a procedure which was a public scandal. This editorial effusion caused much amusement in medical circles, because the journal had always been hostile to the medical profession, and the editor was invited by some journalists to read the name of the celebrated professor backwards, when it appeared that the name Rutan was merely an inversion of the word "Natur."

THE SPREAD OF TUBERCULOSIS VIEWED FROM THE LABORATORY AND FROM THE EPIDEMIOLOGICAL STANDPOINTS.

AN interesting comparison between conclusions drawn from laboratory evidence and others based on an epidemiological examination of families in regard to the spread of tuberculosis is made in the United States Public Health Reports for Feb. 20th. In April, 1913, Dr. E. R. Baldwin, of Saranac Lake, New York, a pioneer station of the scientific study of tuberculosis, as the result of an analytical study of the experimental work done on immunity and the susceptibility of a once-infected animal to superinfection or reinfection, laid down, as "reasonably sure conclusions," that most adults have received some tuberculosis infection, thus acquiring a variable degree of specific allergy. It would follow that during ordinary health the tissues would repel tubercle bacilli partly by this aid; that reinfection is mostly autogenous superinfection and is due to disease, overstrain, trauma, or lowered vitality; and that consequently adults are very little endangered by close contact with open tuberculosis, and not at all by ordinary association. "Childhood," he said, "is the time of infection, youth the time of superinfection and that from the extension of the primary disease." Dr. Baldwin's purpose was to allay a grossly exaggerated phthisiophobia by contrasting the relatively slight danger of infection in adult life as compared with that in childhood. On the other hand, a study of the spread of tuberculosis in families, by Herbert G. Lampson, made in Minneapolis under the supervision of a committee, was published in December, 1913, as a bulletin of the University of Minneapolis. Lampson examined with the tuberculin test 173 individuals in 33 families containing open cases of pulmonary tuberculosis. Of these 124 showed evidence of infection, 41 no evidence, 8 were doubtful. Of the doubtful cases one has since been declared tuberculous, and one has had a pulmonary hæmorrhage. Deducting the 23 centre cases yet living from the 124 infected, 101 individuals, or 67 per cent., were presumably infected from the 33 centre cases. In four families with latent centre cases, out of 22 individuals examined 8 showed tuberculous infection, 3 were suspicious—deducting the 4 centre cases, an infection of 22 per cent. of individuals exposed. In three families with healed centre cases, of 12 individuals examined 6 were infected, or, deducting the 3 centre cases, 33 per cent. In ten families "classed as containing non-tuberculous centre cases," out of 56 individuals examined 1 showed tuberculous infection and 2 were suspicious—1·7 per cent. of all individuals in the household. In five control families containing no suspected cases of tuberculosis, out of 24 individuals examined, 1, or 4·1 per cent., showed evidence of infection. To sum up, a comparative test was thus made in 40 tuberculous families representing 207 individuals, of whom 138, or 66⅔ per cent., showed tuberculosis, and 15 non-tuberculous families representing 80 individuals, of whom 2 showed tuberculosis and 2 were suspicious—i.e., 2½ per cent. Of the 40 families 10, containing 54 individuals, showed tuberculosis in every individual. From these data Lampson concludes that the spread of infection in families having open cases of tuberculosis is greater than is generally believed; that in families where no case of tuberculosis has been found evidence of tuberculous infection was only 2½ per cent., and that the spread of infection is not so great in families with merely latent infection, or with healed cases, as in those with open cases. While, therefore, agreeing with Dr. Baldwin that phthisiophobia is to be strongly deprecated, it would seem as though epidemiological evidence must so far prevail as to resist very strongly any slackening of vigilance against the spread of infection from one human being to another.

THE INSANITARY CONDITION OF DARTMOUTH.

A STRONG indictment of the sanitary condition and management of this historical and picturesque Devonshire town appears in a recently issued report to the Local Government Board by Dr. F. St. George Mivart.[1] Its older houses, which at first sight seem externally to be of a substantial character and reasonably habitable, appear on closer examination often to be built with their backs against the earth, badly lit and ventilated, and with abundant dilapidations. They have long fallen out of fashion and have become subdivided into tenements made without any regard to the requirements of healthy dwellings. Even on bright sunny days the gloom of many of these places is described as oppressive; in the winter it must often be impossible for inmates to carry on any sort of work without artificial light. Inner rooms are partitioned off and used for sleeping which have only borrowed light, and windows are often fixed shut. All kinds of dilapidation and neglect were observed in the condition of the common stairways, passages, and yards. The occupants are described as dirty and careless in habits; on the other hand, as Dr. Mivart observes, it is difficult to see how they could be otherwise in such surroundings. The town water-supply comes from a number of different local sources, some of which are open to considerable suspicion of pollution, and the waterworks management and such methods of filtration as are employed were found quite unreliable. House refuse when collected is dumped, pending removal, in a stoneyard adjoining the quay, where the ground is fouled, attracting swarms of flies. Most of the bakehouses were found in a disgraceful condition, and from the facts stated in the inspector's report his conclusion that their state constitutes a scandal appears fully justified. The milk-supply is obtained from insanitary cowsheds,

[1] Reports on Public Health and Medical Subjects, New Series, No. 80. London: Wyman and Sons, Fetter-lane; Edinburgh: H.M. Stationery Office; Dublin: E. Ponsonby. Price 4d.

and the institution represented as an isolation hospital "seems of little value in its present fragmentary condition." The town council, which is responsible for these and many other glaring defects, resolved in September last that "the council do not concur in the observations of the medical officer of health that the housing conditions of certain areas are insanitary," and their sanitary policy, if it can be so called, is apparently one of resistance to all proposals for efficient execution of the ordinary duties of a sanitary authority under the Public Health and Housing Acts. On a vacancy which occurred over a year ago in the office of inspector of nuisances applicants were invited by an advertisement requiring them to state the salary required. Some 108 replies were received, many being from men with experience of the duties or with certificates of sanitary knowledge obtained from the Royal Sanitary Institute. The appointment, however, was given to a local builder and member of the council, stated to possess no sanitary certificate or special qualifications. While we believe that complaints against local authorities in sanitary matters are often made without much discrimination, and that frequently these authorities and their health officers are given too little credit for what they accomplish, there unfortunately seems no room for doubt in this case. It may be hoped that the incompetence described in this report is quite exceptional in its degree, and that the Local Government Board will not be content until it has been removed. We note that Dr. Mivart's investigations resulted originally from the action of the Admiralty, which is naturally concerned with the health of the inmates of the Royal Naval College which is situated in the borough. It may be expected that the Admiralty will exercise effective pressure to obtain comprehensive reforms.

THE VALUE OF COLLOID SULPHUR IN CHRONIC RHEUMATISM.

Professor A. Robin in a clinical lecture reported in the *Gazzetta degli Ospedali* of April 12th relates two cases of chronic arthritis deformans in which an extraordinary amount of benefit was obtained from the administration of colloid sulphur. Examination of many cases of chronic articular rheumatism revealed a number of discordant facts, but some characteristics common to all. They all suffered from some form of disordered digestion, especially gastric, with lactic acid fermentation. The digestion of albuminoid substances was the most defective, the elimination of lime and magnesia sensibly increased. A diminution in the elimination of phosphoric acid and an increase in the urinary chlorides were also noticed. The blood, with a reduced hæmoglobin index, contained a somewhat excessive quantity of chlorides, showing that there was a certain degree of retention. Treatment directed to these conditions produced temporary improvement, but never resulted in cure. Sulphur was at one time largely given as a remedy in chronic rheumatic conditions, and its efficacy is proved by the beneficial use of the mineral waters of Aix-les-Bains, Luchon, and Cauterets. The administration of free sulphur has, however, fallen into comparative disuse owing to its insolubility and the size of the granules which render its absorption difficult and uncertain. Maillard had the happy inspiration to resort to colloidal sulphur which is endowed with all the properties of colloidal bodies; a tablespoonful of this substance, about 15 grammes, contains 0·20 gramme of sulphur, about as much as is contained in a litre of the old preparations. It has been shown, moreover, that colloid sulphur is entirely and rapidly absorbed by the digestive tract and undergoes all the transformations by which the element is able to pass into the tissues. Its elimination by the urine is effected by one-half or two-thirds under the form of sulphates, the other half or third under the form of sulphur-containing bodies the result of its organic combinations. Colloidal sulphur may be given at the commencement in doses of two teaspoonfuls daily increasing to two tablespoonfuls; this amount should not be exceeded for fear of provoking diarrhœa.

A STUDY OF A MAN.

Mr. Morley Roberts, in "Time and Thomas Waring: A Study of a Man," has revealed with great skill the feelings of a sensitive patient suffering from excessive shock after a heroic colectomy. His hero, a genius, passionate and soured, a mixture of Pharisee and sinner, passes through a phase of agony during recovery from general anæsthetisation which assuredly has fallen to the lot of very few even in these days of major operations. So vividly is the process of return from insensibility described that we become convinced that here is the record of a personal experience. Just as the human embryo passes in utero from the cell to something fish-like, thence to something ape-like, and so to man, the consciousness of Thomas Waring passes during a very short lapse of time through all the phases of the existence of life upon this planet. As he emerges from the depths of insensibility he is in the monad stage, "a point, a point of strange fire, a live speck; something infinitely small in which was concentrated immortal, unmeasured, and infinite suffering." After what seems the process of æons the living speck becomes many specks, each advancing in agony. In other words, the cells in Waring's brain begin to interact, the enduring agony of pain extends. And at last, after what has seemed the whole life of the universe, the summation of all previous existence, the human reason emerges, and he becomes conscious of the presence of another human being in the room. This is his nurse, whose arm he grips so savagely as to bruise it. Then follows another spell of oblivion, and only very gradually Waring regains his powers of thought. But for days he has a strange metallic taste in his mouth, and conceives of the universe as a mechanism of metal. His sense of the values of things has been revolutionised. Nothing matters at all, and from having been a hard man, living a double life, he becomes the kind of philosopher who believes only in kindness. There can be no doubt that when the hero of this remarkable book first approached the operating-table there was a great weight upon his mind, which was besides morbidly awake—he was a famous journalist—to every kind of impression and to the thought of possible death. Consequently, after an operation lasting two hours his poor body suffers a fierce shock, which is followed by strange ethical results. Mr. Morley Roberts has presented an exceptional case in a skilful manner. He has, moreover, dedicated his book to his many medical friends, and though he represents his professional characters as talking together in a strangely unprofessional manner, his dedicatees will be

more inclined to chuckle than to grumble at this. In the famous preface to "The Doctor's Dilemma" the medical profession is manhandled, but in the novel before us it is criticised by a sympathetic admirer. The severest judges of the book will probably be found among that army of martyrs who have been themselves operated upon. The average man who has undergone appendicectomy or an operation for piles has probably during anæsthesia and recovery therefrom had experiences quite different from those recorded for Thomas Waring. In such matters individual experiences vary through an enormous range.

HYDATID CYST OF THE BRAIN.

Hydatid cyst of the brain is sufficiently uncommon to render all cases worth notice. In the *Australian Medical Journal* of Jan. 17th Dr. T. F. Ryan has reported two cases which present many features of interest. A girl, aged 6½ years, was seen in June, 1911, with a history of gradual loss of power in the right hand and arm during the previous three weeks. Examination showed some weakness of the right hand and arm. There was no muscular wasting or loss of sensibility. Observation over several days revealed the fact that at times the right radial artery ceased to beat at the wrist for periods of several hours. The brachial artery could always be felt to pulsate normally. A skiagram of the right shoulder showed nothing abnormal. The tendon reflexes in the right arm were normal and the plantar reflexes were flexor. There was some tendency to incoördination of the movements of the arm. The fundi were normal, but there was a little indefinite nystagmus. During 1912 the patient was seen on a few occasions when it was evident that the whole of the right side was becoming involved. There was some contraction of the flexors of the elbow, wrist, and fingers, and weakness of the leg, mainly in the extensors, with paralytic equino-varus. Paresis of the right side of the face was present, and the tongue was deviated to the right. On the right side the tendon reflexes were exaggerated and the plantar response was extensor. In December weakness became manifest in the left arm and leg, and speech became difficult and hesitating. Examination showed right hemiplegia affecting face, arm, and leg with flexor contracture. The left arm was weak and ataxic. All the tendon reflexes were extremely active. Except for a small patch of anæsthesia over the right shin sensibility was normal. There was double optic neuritis, slight in the right eye, well marked in the left. Percussion of the head gave "a peculiar high tympanitic note" in the left fronto-parietal region. A lateral skiagram of the head showed thinning of the skull in the fronto-parietal region; an antero-posterior skiagram, thinning in the left fronto-parietal region and the outer circumference of a cyst. On Jan. 31st, 1913, an osteoplastic flap was turned down over the left Rolandic area. The skull here was very thin, in some places less than 2 mm. in thickness. The dura mater showed no tendency to bulge and no pulsation, and the flap was replaced. On Feb. 5th the second stage was performed. On removing the bone flap and incising the dura mater a large hydatid cyst presented and was removed. It occupied a large part of the left cerebral hemisphere, its greatest convexity being in the Rolandic area. The bone was not replaced, but the soft tissues were sutured and a small rubber drain was inserted from which serous fluid flowed for a few days. On April 23rd the optic neuritis disappeared and speech became almost normal. There was still some contraction of the flexors of the right arm and some weakness of the right leg with foot-drop. In January, 1914, she could walk well and use her right arm very well. It is noteworthy that at no time was there any headache or vomiting. In the second case the patient, a farmer aged 43 years, had not such a fortunate experience. He was in perfect health until October, 1910, when he fell to the ground whilst ploughing and was carried home unconscious. After 15 minutes he vomited and recovered consciousness. Next morning he resumed work and remained well for six weeks. He then complained of violent headache, which continued for six weeks, until Dr. Ryan saw him for the first time. His mental and physical condition was good, and there was no paralysis or abnormal reflex. There was double optic neuritis. That night he slept well for five hours, and then called out to the nurse who found him unconscious and breathing stertorously. He died in about an hour. The necropsy showed a hydatid cyst of the size of an orange near the left fissure of Rolando.

IS THE REFLEX THE FUNCTIONAL NERVE-UNIT?

IT is not an infrequent phenomenon that in the advance of some branch of science there is evolved an outstanding tenet which later work appears to support, and upon which, as a basis, real advance is made, but which itself is finally uprooted by the very observations which it has stimulated. It appears as if a fate of this kind may befall the long-accepted view that the reflex arc constitutes the basal functional nerve-unit. The reflex, as we know it in its simplest form, is made up of a centripetal or afferent process, whose activity is reflected through the grey matter of the cord into an efferent, effector, or centrifugal mechanism. A reflex which has received very full attention is that of the step, the normal act of progression. In such an act the afferent stimulus was held to be received from the peripheral tegumentary receptors, added to which, as Sherrington showed, are also the stimuli from muscles and joints, the propioceptive receptors. Such stimuli were held to evoke the necessary efferent movements, actions characterised by their rhythmic alternation of opposing forces, and the underlying basis of which was the graded antagonistic opposition of muscle groups, flexion being aided by simultaneous inhibition of extension, and *vice versâ*. Rhythmic progression is conditioned by an equal balance of two antagonistic central activities. Are these activities of fundamentally peripheral origin? If we accept the true reflex mechanism as being responsible for them we are bound to admit that they are. Against this view, however, Dr. Graham Brown, in the current issue of the *Journal of Physiology* (1914, Vol. XLVIII., p. 18) reviews, on the basis of much experimental work of his own and others, the evidence which opposes this idea, and himself advances suggestions which, in brief, allocate to the efferent nerve-units and not the reflex arc the fundamental functional nerve-unit. He has shown, firstly, that the act of progression can occur after all afferent channels, exteroceptive or propioceptive, have been abolished by deep narcosis and section of nerves. This demonstrates independence from the afferent system. Now it has been shown

that rhythmic phenomena are conditioned during the balance of equal and antagonistic opposite activities in the antagonistic "half centres"—i.e., the two efferent neurons to antagonistic muscles. It is conceivable, therefore, that, even in the absence of peripheral stimuli, the factors of fatigue and "rebound" in such centres may explain the rhythm. But Dr. Brown's experiments have shown that with the degree of narcosis he employed both these factors were eliminated. He suggests that the activation of the half centres may be fundamentally conditioned by a stimulus equivalent to the blood stimulus in respiration. Such stimuli may be slight in degree; but it is known that stimulus is most effective when there is a close approximation to an equal and opposite activation of the half centres, so that slight changes would be sufficient. So far, the reasoning is certainly in favour of the truth of the writer's contention. There is next to be asked, however, Of what value are the peripheral stimuli? Do they count for nothing? It is suggested, and here certain facts of evolution enter into the argument, that the spinal reflexes which excite progression are in the nature of distortions of the "beat" of the fundamental rhythm. The fundamental rhythm, being, as the experiments showed, the last to be abolished, is essentially of more primitive and fundamental origin. Originally it was possibly conditioned by circumstances closely allied to the more elemental blood stimuli with its asphyxial changes and in the mechanisms of which afferent organised channels played no part. It was the later organisation which added higher complexity. The reflex was grafted on, as it were, to the fundamental rhythm. Such an addition is represented by the normal reflexes of progression, and this now dominates, by distortion of the original beat, the original rhythm. But it remains a superimposition. It is not, in essence, the fundamental nervous mechanism. We see in this paper a carefully reasoned case against the currently accepted view, and one which must meet with a measure of acceptance until further evidence is forthcoming.

THE RELATION BETWEEN DEFECTIVE AND PROLIFIC STOCKS.

THE paper by Mr. M. Greenwood, jun., and Mr. G. Udny Yule on the Determination of Size of Family and of the Distribution of Characters in Order of Birth from Samples taken through Members of the Sibships[1] is one of considerable importance in that it impugns on statistical grounds statements made on high statistical authority, which if true would give serious cause for alarm. These statements are, first, that defective stocks are more prolific than the normal; and, secondly, that the earlier-born members of a family are more liable to exhibit defects than the later born. The significance of the latter view rests on the fact that the decline in the average size of the family, which has indubitably taken place in recent years, means that the proportion of first- and second-born has increased. Both circumstances would thus lead to an increasing prevalence of defect. Mr. Greenwood and Mr. Yule express their criticisms in a mathematical form, but the principles on which their reasoning is based are quite easily intelligible to persons without mathematical training and appear obvious when pointed out. Bulletins No. 10A and 10B of the Eugenics Record Office (Cold Spring Harbour, Long Island, New York) contain the report of the "Committee to Study and to Report on the Best Practical Means of Cutting Off the Defective Germ Plasm in the American Population." No. 10A describes the scope of the committee's work and No. 10B the "Legal, Legislative, and Adminstrative Aspects of Sterilisation." The latter contains a valuable summary of the sterilisation laws which have been passed in 12 States of the American Union, and of the Bills introduced in other State legislatures which did not become law, but were either thrown out or vetoed by the governor or revoked by referendum. The result of all this legislative activity has been very meagre. In only three States have any sterilisation operations been performed under the statutes—namely, about 300 in Indiana, 268 in California, and 7 in Connecticut. At the present time no operations of this kind are being performed as the constitutional nature of the laws is in question. But although they are dormant it would be premature to conclude that they are dead.

[1] Journal of the Royal Statistical Society, vol. lxxvii., Part 2, January, 1914.

"LOCALISED" TUBERCULOSIS IN THE PIG.

A REPORT made to the Local Government Board by Dr. A. Eastwood and Dr. F. Griffith,[1] which has been issued recently, gives the results of a valuable series of observations on the distribution of visible tuberculous lesions and of tubercle bacilli in a considerable series of pigs selected at the slaughter-house as examples of minor degrees of pig tuberculosis. The term "localised" tuberculosis is often loosely used in meat inspection, but in the sense in which it is used in this report it signifies disease which as a result of naked-eye examination is apparently confined to the lymphatic glands in relation to the alimentary tract. It is clear that among the ordinary pigs which come to the slaughter-house tuberculosis which is actually localised in this way is much less common than tuberculosis which is more or less widely disseminated. Thus at the Brighton abattoir, from which a large part of the material was obtained, 24,144 pigs were examined during the period of selection, of which 209 were reported by the meat inspector to be affected by general tuberculosis, 393 had slightly disseminated tuberculosis, while localised tuberculosis was present in only 59. The pig, as the work of the Royal Commission on human and animal tuberculosis showed, is susceptible to infection with various bacilli of mammalian type (including bovine and human) and with avian bacilli. By far the most common source of its natural infection is the bovine, derived from tuberculous milk or from the tuberculous fæcal discharges of cattle; but avian infection may also arise from ingestion of the excreta of fowls affected by the disease, while in one or two of the series here reported on the bacilli were found to be of the eugonic type, of low virulence for rabbits, indicating a human source of infection. Avian infection in the pig appears to have much smaller tendency to dissemination—when judged by the presence of naked-eye tuberculous lesions—than bovine infection. As a rule, though not invariably, when infection was due to avian bacilli the affected glands were either not enlarged or only slightly so; and they contained gritty or calcareous nodules which were easily shelled out of the surrounding tissue, leaving

[1] Reports to the Local Government Board on Public Health and Medical Subjects. New Series. No. 81. Price 3d.

behind smooth fibrous-walled cavities. With bovine infection, on the other hand, a greater degree of local gland affection was apparent, and when closer examination was made in the laboratory of lungs, liver, spleen, and certain other tissues of the pigs which had been classified in the slaughter-house as examples of "localised" tuberculosis, naked-eye evidence of dissemination was frequently found. Of the 59 pigs above referred to, for example, the disease was ascertained by this special examination to be strictly localised only in 24. In regard to the presence of tubercle bacilli in apparently normal organs and tissues, it was noteworthy—and reassuring in view of the comparative harmlessness of the avian bacillus to man—that the bacilli were readily found in tissues presenting no naked-eye lesions when avian infection was in question, but very seldom in the case of bovine infection. The interesting observations in this report will have special interest for those medical officers who are consulted in connexion with meat inspection. The Royal Commission of 1896 went so far as to recommend that the whole carcass of the pig should be regarded as unfit for food if tuberculosis was present in any degree, and their finding receives some support as a result of these investigations. In practice, however, the recommendation has often been considered too drastic to be generally acted upon, and various modified standards of condemnation have been adopted instead. It may be concluded from the report that where partial condemnation is practised it is important that the examination of the carcass and its organs at the slaughter-house should be thorough, so that the extent to which the animal is affected can be accurately gauged. It should be added that the large amount of pathological work which Dr. Eastwood and Dr. Griffith have undertaken for this report is very fully reported and tabulated. In one or two instances the examination of the tuberculous lesions of the pig demonstrated the coexistence of mammalian and avian bacilli, or of different kinds of mammalian bacilli, in the same animal.

THE ELECTRICAL TREATMENT OF MILK.

WE have received a copy of the report of the city bacteriologist of Liverpool (Professor J. M. Beattie), which presents the details of the experimental inquiry and apparatus involved in the electrical treatment of milk. The results show the complete destruction of disease-producing bacteria, while the chemical constitution of the milk remains unimpaired and the taste is not altered, so that the milk from this point of view may be described according to this report as "raw milk." The conclusions reached are so momentous that we propose to deal with the report in greater detail in a future issue.

THE HISTORICAL MEDICAL MUSEUM.

THE Historical Medical Museum, which was founded by Mr. Henry S. Wellcome in connexion with the Seventeenth International Congress of Medicine, will be reopened on May 28th as a permanent institution in London. It will be known in future as the "Wellcome Historical Medical Museum" and will be open daily from 10 A.M. to 6 P.M., closing at 1 P.M. on Saturday; entrance 54A, Wigmore-street, Cavendish-square, W. Members of the medical and kindred professions will be admitted on presenting their visiting cards. Since closing last October the collections in the museum have been considerably augmented and entirely rearranged. Many objects of importance and interest have been added, which it is hoped will increase the usefulness of the museum to those interested in the history of medicine.

THE INTERNATIONAL SURGICAL ASSOCIATION.

(FROM OUR OWN CORRESPONDENT.)

THE Fourth Congress of the International Surgical Association was held at the Hotel Astor, New York, from April 13th to April 16th inclusive.

The Association meets triennially, and hitherto the meetings have taken place in Brussels; but as Professor A. Depage, of Brussels, President of the Fourth Congress, explained in his opening address, the Association was delighted to accept an invitation to hold a meeting in America, having a high esteem for their American colleagues and for American ideas of peace and civilisation throughout the whole world.

About 100 foreign members attended the meeting, many of them accompanied by their wives, and an almost equal number of members from the United States were present. Moreover, as the annual meeting of the American Surgical Association, which also was held in the Hotel Astor, only terminated its sessions on April 11th, there was a large number of surgeons both from the United States and Canada present at most of the society's meetings. New York and Chicago were well represented; the same may be said of Montreal and Toronto, the visitors from these cities, with Dr. Hamilton Russell, of Melbourne, standing for British surgery in the unavoidable absence of members of the society from the British Isles.

The Opening Meeting.

The opening general meeting, at which many ladies were present, took place at 11.30 A.M., in the grand ballroom of the Hotel Astor. The attendance was large, and of the foreign members Germans were in the majority. In the unavoidable absence of the PRESIDENT of the United States, owing to stress of national affairs, Surgeon-General WILLIAM C. GORGAS presided, and welcomed the Association.

Dr. WILLIAM J. MAYO, of Rochester, Minnesota, president of the American Surgical Association, welcomed the foreign members in the name of that organisation. He was particularly gratified, he said, that the first meeting of the society held outside Brussels should be held in New York. The American medical profession owed a deep debt of gratitude to Europe, for American medicine and surgery started from the shoulders of Europe. He had been asked frequently, whether he thought that Americans had developed their own type of surgery, and he had always answered No. For nearly a century they had depended upon Europe and the British Isles; although there had been and were good surgeons in America, the origin of their knowledge and skill was Europe. He concluded by hoping that the members would go to all the big cities of the United States, for he felt certain that surgeons throughout the country would take the greatest pleasure in showing them all there was to be seen.

In the absence of Professor M. CHARLES WILLEMS, of Ghent, the President of the International Surgical Association, Dr. J. P. HOGUET, of New York, Secretary of the Congress, read his address in French and English. This consisted of a welcome to the members of the Association, a hearty expression of thanks to their American hosts, and an affirmation of the important place in surgery now taken by the Association. He closed by referring to the loss which the society had experienced in the death of the late lamented Dr. Lucas-Championnière, who presided over the Congress with so much dignity and tact in 1911.

Dr. L. L. MACARTHUR, of Chicago, chairman of the American Committee, who spoke next, made feeling references to the loss sustained by surgery in the death of Dr. Roswell Park,

the great Buffalo surgeon having had much to do with the early organisation of the society. It was sad that having worked so hard for the success of the movement, he should not have lived to witness the first meeting in his native country.

Professor A. DEPAGE then delivered his presidential address. After expressing his pleasure in accepting the invitation of American surgeons, he paid a special tribute to the contributions made by America to military surgery. He pointed out how the time had passed when the art of war was but a manifestation of exalted personal courage; it had now called science to its aid in every department, including those of military surgery and sanitation. American medical writers, such as Borden and O'Reilly, had rightly laid stress on the responsibility entailed by the practice of military surgery and on the need for thorough medical organisation of armies. Precautions which would have sufficed in former times were inadequate at the present day. Professor Depage insisted on the necessity for development of the international understanding in the matter of ambulance services. Red Cross organisations had already done much, but the responsibility of the surgeon increased with the dangers of the present time. The Balkan war had emphasised the lesson taught by the war in Manchuria—viz., that the fate of the wounded depended more than anything upon the aid given at the front of the battle, since while an engagement lasted the exposed ground was inaccessible to the ambulance men. Every combatant should carry with him, side by side with his cartridges, the articles necessary for a first dressing. Various countries had already adopted this solution of the difficulty, but a uniform first-aid outfit was desirable, and, above all things, the sanitary education of the soldier must be improved; he must be made to realise the dangers of infection by earth, dust, and water, and the elementary principles of asepsis. But although immediate aid was most efficacious on the battlefield, this help should be limited to precautionary measures. Serious operations, such as amputations and extraction of bullets, should be reserved for hospitals of the second line, provided with experienced surgeons and with civil consultant surgeons attached on regular duty. During recent wars surgeons had been filled with astonishment at the comparative harmlessness of the modern gun; but the so-called "efficacy of the shrapnel" was too horrible, and the Imperial Surgical Society at Constantinople in December, 1912, expressed the fervent wish that the use of shrapnel might be abolished on the same grounds as the explosive bullet. The President concluded his address with a moving plea for universal peace.

On the afternoon of April 13th papers were read and discussions took place on the

Technique of Amputations.

The first paper was read by Dr. WITZEL, of Düsseldorf, and dealt with amputation of the arm and forearm. Dr. Witzel gave as his conclusion that the indications for an amputation could only be pronounced upon by those in touch with all the modern resources for the preservation of wounded, diseased, and deformed limbs. While the aseptic treatment of open wounds, contusions, and fractures allowed the postponement of amputation in time of war as well as in ordinary practice, the processes of suture, resection, anastomosis, and transplantation of the blood-vessels led to the preservation of parts of limbs wounded or affected by arteriosclerosis. Bier's method of prophylactic hyperæmia, together with small carefully made incisions in the suppurating parts, would preserve limbs when septicæmia and pyæmia would have otherwise demanded amputation. Modern operative orthopædics, by means of osteotomy and musculotendinous transplantations could restore their powers to useless limbs. Dr. Witzel reminded his hearers next that in cases of simple tumours and in myeloid sarcoma excision followed by transplantation was more than ever justified. In malignant tumours radiotherapy and chemotherapy were giving great promise.

Amputation of itself, he said, can never endanger life, and should procure for the patient a useful and painless stump, the following being his generalisations.

(*a*) The danger of the actual operation is decreased by an increase of the resisting powers of the subject, whether it is a case of emergency or not; there should be complete arrest of hæmorrhage in accidents; the heart action must be strengthened by drugs, saline infusions, inhalation of oxygen, application of heat, and respiratory exercises. Esmarch's tourniquet and preservation of warmth during the operation all play their part. The choice of the anæsthetic is also an important factor. General anæsthesia is preferable on account of the psychic effect resulting from amputation, Hackenbruch's process is suitable for minor operations, Braun's endoneural anæsthesia for bigger removals, always with addition of narcotics and with strict attention to discipline in the working of the operating theatre; Bier's rachi-anæsthesia will rarely be indicated.

(*b*) After the operation life will be preserved mainly by simple and thorough asepsis, the carrying out of which depends as much on the choice of the site of amputation as in the technique itself. The possibility of operating in a clean manner permits the use of more complicated methods. The section of tissues should be clean; in order not to injure their vitality it is necessary to work with "gentleness, heat, and moisture." For this end the use of antiseptics must be avoided, and there must be a strict arrest of hæmorrhage. Cardiac tonics and respiratory exercise prevent thrombo-embolism.

(*c*) To obtain a painless and serviceable stump clean section is necessary well above the nerve stumps; the production of neuritis by fixation of the nerve roots on the surface of the divided bones must be avoided. Protective occlusion of the medullary canal by the processes of Bier, Wilms, Ritter, or Bunge also prevents this accident. Methodical movement of the soft tissues by massage and early utilisation of the stump in temporary artificial limbs serve the same purpose. For a good utilisation of the stump as a lever for future apparatus regard must be taken of the unequal retraction of the muscles and tendons, while the suture of neighbouring muscles in opposing groups between themselves helps to maintain functional equilibrium.

Dr. P. VON KUZMIK, of Budapest, contributed a paper on Amputation of the Hand. He considered that before proceeding to amputate the hand or even a finger the surgeon is in duty bound to try every physical method of treatment—heliotherapy, Roentgen rays, Bier's hyperæmia, thermotherapy, and immobilisation. For amputation of hand or fingers, all the modern methods have given good results and all operators ought to be as conservative as possible.

Dr. J. F. BINNIE, of Kansas City, read a paper on Amputations of the Leg. No particular improvement has been made in the methods of amputation below the ankle-joint. Amputations through the leg (below the knee) seem all to be equally safe no matter at what level they are performed. If a good weight-bearing stump is secured, then the more of the leg that is retained below the knee the more useful will it be to the patient. The improvements in amputations of the leg are all in the direction of better weight-bearing stumps and the designs of artificial limbs must in the future adapt themselves to these improvements. Hirsch and Bunge's aperiosteal treatment of the bony stump in any amputation and osteoplastic amputations under particularly favourable circumstances are, he said, "very valuable means towards obtaining ideal weight-bearing stumps. Free transplantation of a fragment of bone to the end of the divided tibia may replace the more difficult and complicated osteoplastic methods of Bier and others."

Dr. M. DURAND, of Lyons, read a paper on Amputations of the Leg and Foot. He summed up his conclusions as follows:—

I. *Amputation of toes.*—One of the three middle toes may be amputated (*a*) by disarticulation of the second phalanx, (*b*) by metatarso-phalangeal disarticulation, and (*c*) by amputation in continuity of the first phalanx. These operations do not alter the functions of the foot. The conditions apply to the little toe, and no other operation is recommended. Total disarticulation of the great toe, especially if carried out by the subperiosteal method, gives an excellent result. Simultaneous disarticulation of the five toes makes but slight difference to the walk.

II. *Amputation of the metatarsal bones.*—Amputation of one of the four last metatarsal bones, in continuity or by disarticulation, presents but small difficulty. The disarticulation of the first metatarsus is a little more serious from the functional point of view, but has not the disadvantages ascribed to it, the subperiosteal method being particularly favourable. More than two metatarsal bones must not be amputated, keeping the others. Transmetatarsal and tarso-metatarsal amputations give generally excellent functional results.

III. *Amputations and disarticulations of the anterior tarsus*

which do not suppress it entirely must be recommended; their results are very similar to those of Lisfranc's disarticulation. But Chopart's disarticulation is an unreliable operation; it should be reserved for exceptional conditions.

IV. *Amputations of the posterior tarsus.*—Ricard's operation and sub-astragaloid disarticulation are both excellent and have practically the same value. The osteoplastic amputations of the posterior tarsus (those associated with the names of Sédillot, Pirogoff, Pasquier-Lefort) are useful, and the tibio-tarsal disarticulation (Syme or Jules Roux), carried out according to Ollier's subperiosteal method, gives a supple and enduring stump; it leaves such good functional results that it may be considered equal to the greater part of the more conservative operations of the posterior tarsus.

V. *Supra-malleolar amputations.*—Amputations of the lower third of the leg, employing in the stump solid skin tissues obtained from the heel, sometimes permit the direct resting of the stump on any necessary artificial limb; the length of the leg lever and the power of the muscles which they preserve give a usefulness here very similar to that which follows tibio-tarsal disarticulations.

VI., VII., and VIII. *Amputations of the middle third of the leg* require modification, and *amputations of the leg above the middle part* should be performed only when the extent of the injuries does not permit a lesser sacrifice. Larrey's intracondylar amputation appears preferable to the disarticulation of the knee.

IX. Amputations of the leg and foot owe their gravity solely to the affection which necessitates their performance, and to the general condition of the patient. The progress of surgical technique and of asepsis has done away with the primitive formation of stumps, enabling a more correct adaptation of the stumps to the suitable apparatus. Manufacture of this has considerably improved, and the need for amputations of the middle and lower third of the leg has to a large extent disappeared.

Dr. E. RANZI, of Vienna, read a paper on Amputations below the Knee, in which he supported Bunge's methods, while pointing out that in every amputation it is of importance that the patient should take walking exercise and have massage, as well as put his weight on the artificial limb as soon as possible.

Among those who took part in the discussion were Dr. DEPAGE, of Brussels; Dr. STEINTHAL, of Stuttgart; Dr. MORESTIN, of Paris; Dr. FRANKE, of Braunschweig; Dr. LORTHIOIR, of Brussels; Dr. ZAHRADMKY, of Heneky-Brod; Dr. LAMBOTTE, of Antwerp; and Dr. RITTER, of Posen.

(To be continued.)

THE PREVALENCE OF PNEUMONIA AMONG THE NATIVE LABOURERS ON THE RAND.

THE fact that the mortality among the native labourers on the Rand was excessive has long been notorious, and it has formed the subject of official inquiry from time to time. The last annual report of Dr. Charles Porter, medical officer of health for the municipality of Johannesburg, shows that the chief cause of this high mortality is pneumonia.

In 1911 a special report was prepared by Mr. G. D. Maynard, at the request of Dr. Porter, on the incidence of this disease in the workers in the mines, but it was found that no comparison of one mine with another could properly be made without due consideration being given in each case to such factors as territorial origin of the native workers, diet, nature of housing, depth of the mine, and general sanitary conditions. Sir Almroth E. Wright, who visited Johannesburg for the purpose of ascertaining if the prophylactic inoculation of a pneumococcal vaccine might serve to protect the African natives on the Rand from the ravages of pneumonia, presented a report which was published in THE LANCET.[1] More recently the mine owners in 1913 invited Surgeon-General Gorgas, of the United States Army Medical Corps, whose successful work in lowering the mortality of certain diseases in Cuba and in the Panama Canal Zone is so well known, to make an investigation on the spot and advise as to the best means of preventing the present heavy loss of human life on the Rand. His report, we understand, has not yet been published.

Report on Results of Inquiry.

Meanwhile a very valuable further contribution to the literature of the subject has been recently supplied by Mr. Maynard, now statistician and clinician to the South African Institute for Medical Research, in the form of a memoir issued by that institute.[2] This investigator has the advantage of possessing a wide local knowledge of the circumstances of labour on the Rand, since he was formerly assistant medical officer to the Witwatersrand Native Labour Association. He brings also to his aid in attempting to solve some of the problems the application of the highly technical mathematical methods now employed by modern statisticians. He defines the pneumonia which is met with on the Rand as meaning the disease clinically known as lobar pneumonia when bacteriologically associated with the pneumococcus of Fraenkel. The majority of the "tropical natives" brought to labour in the mines are obtained from the Portuguese districts of Quilimane, Mozambique, Tete, and Portuguese Nyasaland; they are recruited at their kraals and then marched in gangs from rest-camp to rest-camp down to the coast, where at one or other of the ports they embark for Lorenzo Marques, the voyage lasting for several days. After landing they entrain there for the Transvaal, stopping for a few days for medical examination at the low veld station of the company at Ressano Garcia. If found healthy they are passed on to the association's compound at Johannesburg, and remain there under close medical supervision for a further period of at least three weeks. At the end of this time they are again medically examined, and if regarded as fit for work they are allotted to one or other of the mines. It is a fact worth noting that it is during this period of their stay at the Native Labour Association's compound, and before they have begun to work in the mines, that many of the cases of pneumonia are reported, and there is no doubt that the greatest incidence of the disease occurs immediately on the arrival of the natives on the Rand, and that it decreases as the length of their residence increases.

Johannesburg is situated at an altitude of 6000 feet, and therefore climatic conditions are likely to be different there from those to which some at least of the natives have been hitherto accustomed. It appears that pneumonia is most prevalent on the Rand during the cold season, and that second and even third or more attacks are by no means uncommon. A fatal termination is most frequently noted about the fourth day of the illness. Mr. Maynard comes to the conclusion that both the pneumonia attack-rate and the death-rate among "tropical natives" are influenced by the country of origin from which the labourer has come, and the highest attack-rates are found in those persons having the poorest physique. Pneumococcal meningitis as a complication of pneumonia seems to be more common among the "tropical natives" than among Europeans. There is, he thinks, no evidence that pneumonia spreads from case to case. The prophylactic inoculation of a pneumococcal vaccine when employed immediately on the arrival of the natives on the Rand appears to reduce the incidence of the disease for a limited period, but the experimental treatment of cases with a pneumococcal vaccine did not favourably affect the fatality of the disease.

Bacteriological Questions.

Mr. Maynard, in concluding his report, admits that his investigation has not succeeded in throwing much new light on the problem of the causes which lead to the attack of newly arrived native labourers by pneumonia; further inquiries are therefore necessary before any satisfactory pronouncement can be made. He has, however, recently begun the examination of the nasal and throat secretions of a small number of "East Coast" natives after their arrival on the Rand, in order to determine whether the pneumococcus is present at that time; and although the series of examinations is not yet completed, it appears that it is not uncommon to find the organism in the natives' nasopharynx within a few hours of their arrival in the compound at Johannesburg. It will consequently be advisable to find out

[1] THE LANCET, Dec. 14th (p. 1633) and 21st (p. 1701), 1912; Jan. 3rd (p. 1) and 10th (p. 87), 1914.

[2] An Inquiry into the Etiology, Manifestations, and Prevention of Pneumonia amongst the Natives on the Rand, Recruited from Tropical Areas, by G. D. Maynard, F.R.C.S. Memoir No. 1, published by the South African Institute for Medical Research, Johannesburg, November, 1913, pp. 128, with maps and charts. Price 5s.

if the pneumococcus exists in the nasal passages of these natives when they are at home in their kraals, and, if not, at what point of their journey to the Rand they become infected.

Mr. Maynard regards it as being of practical importance to discover whether change of climate is accompanied by the appearance of the pneumococcus in a previously uninfected nasopharynx, or whether there is no increase in the rate of such infections owing to change of locality. It is possible that some other conditions, such as lowered resistance brought about by change of climate, may be factors in the morbid process that occurs in the natives. It is difficult to obtain trustworthy information from native sources, but it appears to be likely that pneumonia occurs among the people at home in their villages. A suggestion is made that there may be several strains or varieties of the pneumococcus possessing different properties and qualities of virulence, and that perhaps one strain affords no immunity to the attacks of another strain. Arrangements, we learn, are being made at the South African Institute to carry out further inquiries on the lines above indicated, including the examination of the natives under ordinary conditions at their own kraals, as well as at the various resting camps and compounds situated on the routes usually followed to reach the Rand.

Further Investigations.

It is worth mentioning in conclusion that when, in 1912, the Union Government of South Africa appointed a Commission, of which Dr. Porter is a member, to investigate the subject of tuberculosis, an instruction was given that they should also "inquire into and take evidence for the purpose of ascertaining the extent and causes of the mortality of natives employed in the Witwatersrand mines, and their susceptibility to pneumonia, with special reference to those coming from tropical areas, and to make recommendations thereon." This Commission has not yet presented its report, but we presume it will not long be delayed. It is hoped that with this and Surgeon-General Gorgas's report, supplemented by the further investigations of the South African Institute already referred to, most of the doubts and difficulties concerning this disease in the Rand district will be cleared away. Surgeon-General Gorgas's report is fully dealt with this week by our Special Correspondent on the spot.

REPORT OF THE TROPICAL DISEASES RESEARCH FUND.[1]

SINCE the Tropical Diseases Research Fund was established about ten years ago the advisory committee has effected a large amount of valuable work, but it is somewhat humiliating to a colonising nation like ours to find that the British Government does not give anything like adequate support to the scientific researches which have done so much already to reduce the excessive sickness and mortality rates recorded in many of our colonies and protectorates. The present income of the fund is unable to meet in a proper manner the pressing requirements of tropical research, the total receipts being only £3445, of which the British Government contributes £1000 and India £500, while the Dominion and Colonial Governments give £1945.

The Expenditure of the Fund.

The expenditure for 1913 amounted to £3600—that is, £155 more than the income—the excess having to be met, as in some previous years, by drawing upon a balance accumulated in the past. It is obvious that something should be done to place the finances on a sounder basis. The committee strongly urge the extreme desirability of having the income increased in view of the many directions in which important researches might be instituted for the benefit of our tropical colonies and dependencies if only sufficient means were permanently available. In allocating the grants, and looking at the unsatisfactory position of the finances, it was carefully considered whether a reduction could be made in the amounts voted to the Schools of Tropical Medicine in London and Liverpool; but on certain representations being made it was decided to give £1200 to each of them, £750 to the University of London, and £450 to the University of Cambridge. The grant to the London School was expended in paying the salaries and maintaining the laboratories of the teachers and investigators of helminthology, protozoology, and entomology. The Liverpool School employed their grant to defray the cost of special researches in their laboratories on trypanosomiasis, general parasitology, helminthology, and entomology, as well as in carrying out some investigations on malaria. The sum given to the University of London was used as before in paying the salary of the professor of protozoology, and the grant to the University of Cambridge was employed partly to support a research studentship in medical entomology, partly in helping to pay the salary of an assistant in the Quick Laboratory and also that of a helminthologist, and partly in assisting to defray the general expenses of that laboratory. It is worth noting that the sum given to the University of Cambridge in 1913 was larger by £100 than in the previous year; in the opinion of the committee this increase was amply justified by the importance and extent of the research work carried on in the Quick Laboratory by Professor Nuttall and his assistants.

The Work of the Advisory Committee.

The committee was consulted during the year on a variety of matters by the Secretary of State, among other things being the important question of the measures to be taken to safeguard India and our Eastern colonies against the danger of the introduction of yellow fever after the opening of the Panama Ship Canal. To their report the committee have appended a number of returns received from certain colonies and protectorates in accordance with a request contained in the circular despatch dated Dec. 20th, 1910; these give statistical and other information respecting mosquito-borne diseases, including malaria, blackwater fever, yellow fever, filariasis, and dengue, and contain also a brief account of the antimalarial measures adopted in each colony or protectorate. The committee, it appears, attach much importance to the regular receipt and careful preparation of these returns, and they call special attention to the excellence of those received from South Nigeria and the Straits Settlements. In the appendices affixed to the committee's report are reports of the London and Liverpool Schools of Tropical Medicine, the report of the Professor of Protozoology in the University of London, and the report on the work carried on in the Quick Laboratory at Cambridge. Appended also are a number of reports on laboratory and field work from some colonies. So far as considerations of space permit, we make a short reference to most of these reports.

The Report of the Professor of Protozoology in the University of London.

Professor Minchin among other work continued his investigations, in conjunction with Dr. J. D. Thomson, on trypanosoma lewisi. He has had to modify his former opinion as to the way in which the rat received its infection, having formerly held that the trypanosomes were regurgitated from the infected flea's stomach through the proboscis, and then entered the rat by inoculation of the skin. His experiments, however, have failed to support this view, and he now admits that the opinion expressed by Nöller and by Wenyon is likely to be the correct one—namely, that the trypanosomes pass out of the flea in the fæces and the rat becomes infected by licking the fæces off its skin. Professor Minchin's work, we regret to learn, was somewhat hindered for a time by the state of his health. Various researches were conducted in his laboratories by other investigators under his supervision. His assistant, Dr. H. M. Woodcock, made two special researches—the first on a remarkable parasite of the goat and other ruminants and certain flagellates which develop in goat dung, the second being on the possible transmissive agent or agents of the blood parasites of common British birds.

The Work Done at the Quick Laboratory, Cambridge.

No fewer than 23 scientific papers were published during the year by workers in the Quick Laboratory. These papers dealt with pathogenic protozoa and the diseases caused by them, the structure and biology of ticks, and observations on the biology of insects. Professor Nuttall states that probably the most interesting results obtained in 1913 were

[1] Report of the Advisory Committee of the Tropical Diseases Research Fund for the Year 1913. Presented to both Houses of Parliament by command of His Majesty. London: His Majesty's Stationery Office. 1914. Pp. 230. Price 2s. 6d.

those relating to the conditions influencing the transmission of East Coast fever, the reproduction of Canadian "tick paralysis" in a dog in Cambridge by means of a single imported tick, and the observations of parthenogenesis and variability in ticks under experimental conditions.

Research Work at the London School of Tropical Medicine.

For six months Dr. R. T. Leiper, the helminthologist, was in West Africa investigating the carrier of filaria loa, the causal agent of "Calabar swelling." On his return he was engaged with Surgeon Atkinson, R.N., in examining the collection of entozoa, made by the Scott Antarctic Expedition, containing trematoda, cestoda, acanthocephala, and nematoda. Dr. C. M. Wenyon, the protozoologist, conducted researches on leishmaniasis from South American skin lesions, on trypanosoma lewisi, and on T. rhodesiense, the two latter in conjunction with Dr. H. M. Hünschell. Later in the year Dr. Wenyon went to Malta to carry out observations on Oriental sore and sandflies, and also to study human and canine kala-azar. The entomologist, Lieutenant-Colonel A. Alcock, furnishes routine reports, and, among other work, observations and experiments were carried out to elucidate or confirm the life-history of the human flea, the cat flea, the blue flesh-fly, and the bed-bug.

Research Work at the Liverpool School of Tropical Medicine.

Professor J. W. W. Stephens and Dr. H. B. Fantham made a series of further measurements of trypanosoma rhodesiense and T. gambiense, and Professor Stephens with Dr. B. Blacklock studied the morphology of two strains of T. brucei, one from Uganda and the other from Zululand. Some observations on external myiasis in a monkey were carried out by Dr. Blacklock and Mr. H. F. Carter. Professor Warrington Yorke and Dr. Wakelin Barrett made some experiments in hæmoglobinæmia and on the relationship of hæmoglobin to bile pigments. An examination of the efficacy of stibium trioxide (trixidin) as a remedy for trypanosomiasis was carried out by Professor Yorke and Dr. Blacklock, and the same investigators also studied the trypanosomes causing dourine (mal de coït), and dealt with the classification and identification of the more important mammalian trypanosomes. Dr. H. B. Fantham investigated the spirochætes affecting the vascular and respiratory systems of man, the various pathogenic trypanosomes of man and transport animals, and various parasites of birds, fish, and insects; he also continued his researches on the "bee disease." Dr. D. Thomson visited Panama and British Guiana to make observation of the sanitation of these places, and since then he has been engaged with Dr. J. G. Thomson in the cultivation of malarial parasites *in vitro*. Dr. Fantham in 1912, at the invitation of the Anglo-Egyptian Government, visited Khartoum and brought back with him much valuable material.

Laboratory and Field Work in the Colonies.

British Guiana.—Investigations were made by Dr. K. S. Wise and Dr. E. P. Minett on (1) aspergillar mycosis, (2) septicæmia and filaria bancrofti, (3) epidermophyton cruris, and (4) epidemic dropsy. Interesting facts are given as to this last-named disease, which broke out among the carriers of an expedition into the interior. The occurrence of this malady was attributed to the long-continued use of dried and tinned foods, leading to a deficiency of certain substances essential for maintaining health.

Ceylon.—Dr. A. Castellani carried out researches on (1) a new intestinal protozoal parasite causing dysenteric symptoms; (2) peculiar bodies found in a case of tropical splenomegaly with fever; (3) cases of pseudo-diphtheria due to fungi; (4) the plurality of species of the so-called thrush fungus; and (5) typhoid-paratyphoid vaccination with mixed vaccines.

Fiji.—The treatment of yaws and syphilis by salvarsan is discussed by Mr. P. T. Harper, who regards the use of this in yaws as economical since it shortens greatly the patient's stay in hospital. Mr. A. E. Ireland reports on the examination of certain specimens of rice in some of which the pericarp and in some also the subpericarpal layers had been removed wholly or in part in the process of milling. Siam rice being the most denuded. There had been, however, no beri-beri following the long-continued use of such rice, this being probably accounted for by the fact that dhal is invariably eaten with the rice.

Hong-Kong.—An investigation of the mosquitoes of this colony was carried out, special search being made for stegomyia fasciata, but practically this species is absent, S. scutellaris being the predominating species. As, however, S. fasciata exists in Japanese ports as well as in the Philippines and Singapore, with which Hong-Kong is in communication by shipping, there is a possibility of its importation.

Jamaica.—Dr. H. H. Scott made a number of investigations on enteric fever, ankylostomiasis, dysentery, and "vomiting sickness," details of which are given. As regards the last-named disease, he puts forward evidence to disprove its relationship with yellow fever; on bacteriological grounds he shows that some of the reported cases were suffering from cerebro-spinal fever. Dr. W. D. Neish contributes a report on the tabanidæ of Jamaica, and gives notes on malaria and ankylostomiasis.

Leeward Islands.—The medical officers of St. Kitts report on the treatment of yaws by salvarsan, the average stay in hospital being reduced by it to 21 days. One case of filariasis was also treated by salvarsan, and has progressed favourably since he received two injections.

Malay States.—In the Institute for Medical Research, of which Dr. H. Fraser is director, attempts were made to cultivate the leprosy bacillus but without success, though the technique, described by those who claim to have succeeded, was carefully followed.[2] Dr. W. Fletcher continued his researches on blackwater fever, and Dr. A. T. Stanton made investigation into the anopheles mosquitoes of Malaya and their larvæ; he also inquired into the changes which occur in certain characters of these larvæ in the course of their growth. Mr. J. D. Gimlette reports on beri-beri in Kelantan, and we gather that he holds the view that rice "acts only as a vehicle" of the poison and not as a "causative agent" of the disease.

Sierra Leone.—Among the reports furnished are several on the splenic index in some of the districts. Dr. J. W. Collett investigated the subject of dried vaccine lymph; he prefers a lanolated calf lymph. Dr. J. Y. Wood gives notes on 257 cases of goitre collected in the Koinadugu district in a period of six months.

Trinidad.—Dr. F. L. de Verteuil reports on cases in the leper hospital, and states that he finds nastin valuable in instances where there is no ulceration, especially when it is combined with antileprol; but to be successful the treatment must be continued for two years or more, whereas most patients give up the remedy after a few months' trial.

Windward Islands.—Some 245 cases of yaws were treated with salvarsan, of which 229 were discharged from the hospital as cured; 12 cases, or 5 per cent., had a relapse within three months, but it is probable they had not received a sufficient dose of the drug. It appears that the natives apply eagerly for the treatment, and if there had been a regular and adequate supply of salvarsan available the number of cases treated would have far exceeded the number stated above.

ROYAL COMMISSION ON VENEREAL DISEASES.

AT the thirty-first meeting of the Royal Commission on Venereal Diseases evidence was given by Mr. F. Richardson Cross, one of the representatives before the Commission of the Royal College of Surgeons of England. Mr. Cross dealt principally with the effects of venereal diseases upon the eye. He described the serious results which venereal diseases produced in this connexion, and expressed the opinion that a large proportion of the cases of blindness were due to these diseases. He was not able to give complete statistics on this point, but he gave as an example an examination conducted at a blind school which showed that blindness was due to ophthalmia neonatorum in 47 cases out of 102. He also referred to the results of an investigation at a French institution which suggested that out of 625 cases of blindness 325 were traceable to venereal disease. Mr. Cross considered that the importance of venereal diseases was only realised by a very limited number of people, and he thought that the medical profession ought to instruct the public. It should be pointed out that any of these forms of disease were not local things which would pass off, but that the

[2] THE LANCET, Sept. 27th, 1913, p. 918.

individual might be stamped for life with it, and that it might go down to his or her posterity. It was necessary that the knowledge should be spread very tactfully, but it ought to be done.

Mr. Cross alluded to the importance of early diagnosis and energetic and satisfactory treatment of these diseases, and urged that some assistance should be given by the State. He did not think that the Insurance Act touched this matter at all. The doctor under the Insurance Act could not be expected to make a scientific investigation, and neither he nor the chemist could afford the expense of injections of salvarsan. Laboratories in which tests could be made for purposes of diagnosis should be subsidised and developed, and grants should also be made to assist treatment by hospitals. He was not in favour of special hospitals for venereal diseases, but thought that persons suffering from them should be treated among the ordinary patients as far as possible. It ought to be made easy for people to get thorough treatment for these diseases, and it would be an advantage if evening clinics could be established to deal with them.

At the thirty-second meeting Dr. C. T. Parsons, medical superintendent of the Fulham Poor-law Infirmary, gave evidence. Dr. Parsons described the treatment he had adopted, which followed the lines of that used at the Rochester-row Hospital. Salvarsan or neosalvarsan had been used at the Fulham Infirmary since April, 1911. The experience had been that most lesions healed very rapidly under its influence. The results had been most striking in cases of acquired syphilis, and had been less successful in the case of congenital syphilis, while only temporary relief of symptoms had been obtained in the case of parasyphilitic conditions. On the whole neosalvarsan had been found to be better tolerated but less efficacious than salvarsan. No bad results of a serious character had followed the injections. The only difficulty in carrying out the treatment had been in inducing patients to submit to it and to remain until it was completed. A few patients refused to have any injection after the first, and some insisted upon taking their discharge directly the lesions had healed.

Dr. Parsons said that one of the greatest needs of the Poor-law infirmary in connexion with the treatment of venereal diseases was the provision of facilities for bacteriological examinations and the carrying out of Wassermann tests.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns with populations exceeding 50,000 persons at the last Census and whose aggregate population at the middle of this year is estimated at 18,120,059 persons, 9467 births and 5259 deaths were registered during the week ended Saturday, April 25th. The annual rate of mortality in these towns, which had declined from 16·5 to 14·9 per 1000 in the four preceding weeks, rose to 15·1 per 1000 in the week under review. Among the several towns the death-rate ranged from 4·7 in Eastbourne, 4·9 in Swindon, 6·9 in Ilford, 7·3 in Edmonton, and 7·5 in Reading, to 21·1 in Plymouth and in Dudley, 21·8 in Great Yarmouth, 23·1 in Dewsbury, and 23·5 in Stoke-on-Trent.

The 5259 deaths from all causes were 67 in excess of the number in the previous week, and included 445 which were referred to the principal epidemic diseases, against 433 and 438 in the two preceding weeks. Of these 445 deaths, 166 resulted from whooping-cough, 140 from measles, 66 from infantile diarrhœal diseases, 40 from diphtheria, 23 from scarlet fever, and 10 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·3, against 1·2 and 1·3 per 1000 in the two preceding weeks. The deaths attributed to whooping-cough, which had been 172, 150, and 117 in the three preceding weeks, rose to 166 last week, and caused the highest annual death-rates of 1·3 in Leicester, 1·4 in Sheffield, 1·6 in Rotherham, 1·7 in Tynemouth and in Swansea, 1·9 in Cardiff, and 2·1 in Middlesbrough. The deaths referred to measles, which had been 137, 134, and 153 in the three preceding weeks, fell to 140 last week; the highest death-rates from this cause were 1·7 in Sheffield, 1·8 in Merthyr Tydfil, 1·9 in Burnley, 2·0 in Leicester, and 3·0 in Dudley. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 77, 54, and 61 in the three preceding weeks, further rose to 66 last week, of which 18 were registered in London, 4 in Birmingham, 4 in Liverpool, 4 in Manchester, and 3 each in Stockport, Birkenhead, Middlesbrough, and Newcastle-on-Tyne. The deaths attributed to diphtheria, which had been 51, 44, and 50 in the three preceding weeks, declined to 40 last week, and included 10 in London, 3 in Coventry, and 2 each in Portsmouth, Stoke-on-Trent, Birmingham, Leicester, Liverpool, and Salford. The deaths referred to scarlet fever, which had increased from 33 to 40 in the four preceding weeks, fell to 23 last week; 5 deaths were recorded in London, 4 in Birmingham, and 2 each in Manchester, Salford, and Sheffield. The fatal cases of enteric fever, which had been 12, 12, and 17 in the three preceding weeks, declined to 10 last week, of which 2 occurred in London.

The number of scarlet fever patients under treatment in the London Fever and the Metropolitan Asylums Hospitals, which had been 3182, 3068, and 2992 at the end of the three preceding weeks, had further declined to 2886 on Saturday last; 305 new cases were admitted during the week, against 399, 306, and 289 in the three preceding weeks. These hospitals also contained on Saturday last 1141 cases of diphtheria, 356 of whooping-cough, 101 of measles, and 57 of enteric fever, but not one of small-pox. The 1248 deaths from all causes in London were 7 fewer than the number in the previous week, and corresponded to an annual death-rate of 14·4 per 1000. The deaths referred to diseases of the respiratory system, which had been 280, 219, and 263 in the three preceding weeks, fell to 258, and were 71 below the number registered in the corresponding week of last year.

Of the 5259 deaths from all causes in the 97 towns, 193 resulted from various forms of violence, and 408 were the subject of coroners' inquests, while 1527 occurred in public institutions. The causes of 35, or 0·7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in its 14 suburban districts, in Manchester, Bristol, Hull, Nottingham, Salford, and in 55 other smaller towns. Of the 35 uncertified causes of death, 8 were recorded in Birmingham, 3 in Gateshead, and 2 each in Stoke-on-Trent, Liverpool, Bootle, and Blackburn.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns with an aggregate population estimated at 2,293,200 persons at the middle of this year, 1359 births and 702 deaths were registered during the week ended Saturday, April 18th. The annual rate of mortality in these towns, which had been 16·5, 18·6, and 16·5 per 1000 in the three preceding weeks, further declined to 16·0 per 1000 in the week under notice, against an average rate of 18·2 in the 13 weeks of last quarter. Among the several towns the death-rate ranged from 8·8 in Motherwell, 11·8 in Leith, and 12·1 in Dundee, to 19·0 in Kirkcaldy, 21·8 in Coatbridge, and 22·0 in Ayr.

The 702 deaths from all causes were 25 fewer than the number in the previous week, and included 55 which were referred to the principal epidemic diseases, against 81 and 65 in the two preceding weeks. Of these 55 deaths, 20 resulted from measles, 13 from infantile diarrhœal diseases, 11 from whooping-cough, 7 from scarlet fever, and 4 from diphtheria, but not one from enteric fever or from small-pox. The mean annual death-rate from these diseases was equal to 1·3 per 1000, and coincided with the rate recorded in the 97 large English towns during the same week. The deaths attributed to measles, which had been 34, 37, and 31 in the three preceding weeks, further fell to 20, and comprised 15 in Glasgow, 3 in Ayr, and 2 in Edinburgh. The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 14, 14, and 5 in the three preceding weeks, rose to 13, of which 6 were recorded in Glasgow, 2 in Dundee, and 2 in Aberdeen. The fatal cases of whooping-cough, which had been 11, 15, and 12 in the three preceding weeks, were 11, and included 5 in Glasgow and 3 in Coatbridge. The 7 deaths attributed to scarlet fever, of which 5 occurred in Glasgow, were slightly below the weekly average in the preceding quarter. The fatal cases of diphtheria, which had been 9, 9, and 7 in the three preceding weeks, further declined to 4, and comprised 2 in Glasgow, 1 in Edinburgh, and 1 in Aberdeen.

The deaths referred to diseases of the respiratory system, which had been 111, 166, and 137 in the three preceding weeks, further fell to 120 in the week under notice; and 29 deaths resulted from various forms of violence, against 33 and 28 in the two preceding weeks.

In the 16 largest Scotch towns 1236 births and 741 deaths were registered during the week ended Saturday, April 25th. The annual rate of mortality in these towns, which had been 18·6, 16·5, and 16·0 per 1000 in the three preceding weeks, rose to 16·9 per 1000 in the week under review. Among the several towns the death-rate ranged from 7·7 in Perth, 7·8 in Falkirk, and 12·6 in Motherwell, to 21·6 in Hamilton, 21·9 in Aberdeen, and 23·6 in Ayr.

The 741 deaths from all causes were 39 in excess of the number in the previous week, and included 71 which were

referred to the principal epidemic diseases, against numbers decreasing from 81 to 55 in the three preceding weeks. Of these 71 deaths, 29 resulted from measles, 18 from infantile diarrhœal diseases, 9 from whooping-cough, 9 from diphtheria, 4 from scarlet fever, and 2 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·6, against 1·3 per 1000 in the 97 large English towns. The deaths attributed to measles, which had been 37, 31, and 20 in the three preceding weeks, rose to 29 last week, of which 20 occurred in Glasgow, 3 in Edinburgh, and 3 in Hamilton. The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 14, 5, and 13 in the three preceding weeks, further rose to 18, and included 10 in Glasgow and 2 in Kilmarnock. The fatal cases of whooping-cough, which had been 15, 12, and 11 in the three preceding weeks, further declined to 9, and comprised 8 in Glasgow and 1 in Coatbridge. The deaths attributed to diphtheria, which had been 9, 7, and 4 in the three preceding weeks, rose to 9 last week, of which 4 occurred in Glasgow, 2 in Edinburgh, and 2 in Kilmarnock. The deaths referred to scarlet fever, which had been 4, 6, and 7 in the three preceding weeks, fell to 4 last week, of which 2 were registered in Glasgow. The 2 fatal cases of enteric fever were recorded in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 166, 137, and 120 in the three preceding weeks, rose to 130 in the week under review; and 31 deaths resulted from various forms of violence, against 28 and 29 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland, with an aggregate population estimated at 1,205,280 persons at the middle of this year, 673 births and 584 deaths were registered during the week ended Saturday, April 25th. The annual rate of mortality in these towns, which had been 21·7, 20·3, and 22·5 per 1000 in the three preceding weeks, rose to 25·3 per 1000 in the week under notice, against corresponding rates of 15·1 and 16·9 in the English and Scotch towns respectively. The death-rate was equal to 27·9 in Dublin (against 16·9 in Glasgow and 14·4 in London), 23·4 in Belfast, 33·3 in Cork, 16·5 in Londonderry, 28·4 in Limerick, and 24·7 in Waterford, while in the 21 smaller towns the mean rate was 22·2 per 1000.

The 584 deaths from all causes were 65 in excess of the number in the previous week, and included 69 which were referred to the principal epidemic diseases, against numbers increasing from 48 to 75 in the three preceding weeks. Of these 69 deaths, 37 resulted from measles, 12 from whooping-cough, 7 from scarlet fever, 7 from infantile diarrhœal diseases, 3 from diphtheria, and 3 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 3·0, against corresponding rates of 1·3 and 1·6 per 1000 in the English and Scotch towns respectively. The deaths attributed to measles, which had been 26, 37, and 42 in the three preceding weeks, fell to 37 last week, of which 35 occurred in Dublin. The deaths referred to whooping-cough, which had been 10, 9, and 14 in the three preceding weeks, fell to 12, and included 8 in Belfast and 2 in Dublin. The 7 fatal cases of scarlet fever, of which 6 were registered in Belfast, were 2 in excess of the average in the four preceding weeks. The deaths of infants (under 2 years), attributed to diarrhœa and enteritis, which had been 6, 8, and 10 in the three preceding weeks, declined to 7, and included 3 in Dublin and 2 in Belfast. The 3 deaths referred to diphtheria, which were all recorded in Dublin, were equal to the average number in the four preceding weeks. The 3 fatal cases of enteric fever occurred in Cork. Lisburn, and Ballymena.

The deaths referred to diseases of the respiratory system, which had been 118, 102, and 115 in the three preceding weeks, fell to 112 in the week under notice. Of the 584 deaths from all causes, 192, or 33 per cent., occurred in public institutions and 10 resulted from various forms of violence. The causes of 23, or 3·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes last week did not exceed 0·7 per cent.

VITAL STATISTICS OF LONDON DURING MARCH, 1914.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the ten diseases specified in the table was equal to an annual rate of 7·4 per 1000 of the population, estimated at 4,516,612 persons in the middle of the year; in the three preceding months the rates were 9·0, 8·3, and 8·5 per 1000 respectively. The lowest rates in the month were recorded in Chelsea, the City of Westminster, St. Marylebone, Holborn, Finsbury, Shoreditch, and Stepney; and the highest rates in Hammersmith, Fulham, Hampstead, Southwark, Greenwich, and Woolwich. Scarlet fever was less prevalent than it had been in the preceding month; the greatest proportional prevalence of this disease was recorded in Hammersmith, Fulham, Southwark, Lambeth, Deptford, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 3810, 3643, and 3328 at the end of the three preceding months, had further declined to 3138 at the end of the month; the weekly admissions averaged 337, against 445, 400, and 379 in the three preceding months. The prevalence of diphtheria also showed a slight decrease as compared with that in the preceding month; this disease was proportionally most prevalent in Hampstead, Southwark, Battersea, Greenwich, Lewisham, and Woolwich. The Metropolitan Asylums Hospitals contained 1306 diphtheria patients at the end of the month, against 1099, 1092, and 1225 at the end of the three preceding months; the weekly admissions averaged 158, against 146, 153, and 166 in the three preceding months. The prevalence of enteric fever showed a very considerable decline as compared with that in other recent months; among the several metropolitan boroughs this disease was proportionally most prevalent in Fulham, Chelsea, the City of Westminster, Islington, Bethnal Green, Southwark, and Greenwich. There were 66 enteric fever patients under treatment in the Metropolitan Asylums Hospitals at the end of the month, against 51, 65, and 82 at the end of the three preceding months; the weekly admissions averaged 6, against 9, 14, and 15 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Finsbury, Shoreditch, Bethnal Green, and Southwark. The 43 cases of puerperal fever notified during the month included 5 in Shoreditch, 5 in Wandsworth, 4 in Fulham, 4 in Islington, 4 in Lambeth, and 3 in St. Marylebone. Of the 10 cases of cerebro-spinal meningitis, 2 belonged to Poplar, and the 3 cases of poliomyelitis belonged respectively to Paddington, Islington, and Stepney.

The mortality statistics relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates for all causes are further corrected for variations in the sex- and age-constitution of the populations of the several boroughs. During the five weeks ending April 4th the deaths of 6591 London residents were registered, equal to an annual rate of 15·2 per 1000; in the three preceding months the rates had been 14·9, 18·4, and 14·8 per 1000 respectively. The death-rates for the month ranged from 10·1 in Lewisham, 10·7 in Wandsworth, 10·9 in Hampstead, 11·7 in Kensington, and 13·1 in Stoke Newington, to 18·0 in Finsbury, 18·1 in Bethnal Green, 18·4 in Poplar, 19·2 in Shoreditch and in Southwark, and 20·3 in the City of London. The 6591 deaths from all causes included 415 which were referred to the principal infectious diseases; of these, 79 resulted from measles, 33 from scarlet fever, 61 from diphtheria, 138 from whooping-cough, 12 from enteric fever, and 92 from diarrhœa and enteritis among children under two years of age. The lowest death-rates in the month from these infectious diseases were recorded in Paddington, Kensington, Stoke Newington, Battersea, and Lewisham; and the highest rates in St. Pancras, Bethnal Green, Poplar, Camberwell, Deptford, and Greenwich. The 79 fatal cases of measles were 310 fewer than the corrected average number in the corresponding period of the five preceding years; this disease was proportionally most fatal in Finsbury, Stepney, Bermondsey, Camberwell, Deptford, and Greenwich. The 33 deaths from scarlet fever were 12 in excess of the corrected average number; the greatest proportional mortality from this disease occurred in Kensington, St. Pancras, Islington, Poplar, Southwark, Lambeth, and Camberwell. The 61 fatal cases of diphtheria were 4 above the corrected average number; the highest death-rates from this disease were recorded in Hammersmith, Chelsea, Finsbury, Bethnal Green, Poplar, Bermondsey, and Woolwich. The 138 deaths from whooping-cough were 34 fewer than the corrected average number; this disease was proportionally most fatal in St. Marylebone, Hampstead, St. Pancras, Hackney, Shoreditch, Bethnal Green, Poplar, and Southwark. The 12 deaths from enteric fever were slightly in excess of the corrected average number, and included 2 in Islington, 2 in Poplar, and 2 in Greenwich. The mortality from diarrhœa and enteritis among children under two years of age was proportionally greatest in Hammersmith, St. Marylebone, Hackney, Bethnal Green, Poplar, Lambeth, and Camberwell. In conclusion, it may be stated that the aggregate mortality in London during the month under notice from the principal infectious diseases, excluding diarrhœa, was 41·3 per cent. below the average.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1914.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1914.	NOTIFIED CASES OF INFECTIOUS DISEASE.												DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.			
LONDON...	4,516,612	—	1776	875	—	53	1	43	433	10	3	3194	7·4	—	79	33	61	128	12	92	415	1·0	6591	15·2
West Districts.																									
Paddington	142,055	—	51	31	—	—	1	1	15	—	1	100	7·3	—	—	—	2	3	—	—	5	0·4	196	14·3
Kensington	170,817	—	66	15	—	—	—	—	18	1	—	100	6·1	—	—	4	2	—	—	—	6	0·4	194	11·7
Hammersmith	124,750	—	84	12	—	2	—	—	14	—	—	112	9·4	—	—	1	3	2	—	4	10	0·8	168	13·8
Fulham	158,849	—	99	24	—	3	—	4	14	—	—	144	9·5	—	1	—	—	3	1	3	8	0·5	209	14·2
Chelsea	63,791	—	18	11	—	2	—	1	3	—	—	35	5·7	—	—	—	3	—	—	1	4	0·7	89	13·8
City of Westminster	152,346	—	39	12	—	6	—	2	11	—	—	70	4·8	—	—	1	1	4	1	3	10	0·7	200	14·4
North Districts.																									
St. Marylebone	112,892	—	26	5	—	2	—	3	6	—	—	42	3·9	—	—	—	—	6	—	5	11	1·0	189	17·8
Hampstead	86,731	—	27	54	—	—	—	1	6	—	—	88	10·6	—	—	—	1	6	—	2	9	1·1	86	10·9
St. Pancras	212,497	—	86	35	—	3	—	2	22	1	—	149	7·3	—	3	5	1	17	—	2	28	1·4	364	17·8
Islington	324,764	—	125	68	—	6	—	4	22	1	1	227	7·3	—	4	5	1	13	2	6	31	1·0	546	17·1
Stoke Newington	50,454	—	21	10	—	—	—	—	5	—	—	36	7·4	—	—	—	1	—	—	1	2	0·4	67	13·1
Hackney	223,724	—	52	51	—	2	—	1	37	—	—	143	6·7	—	1	1	4	14	—	7	27	1·3	316	14·8
Central Districts.																									
Holborn	45,861	—	19	1	—	—	—	—	3	—	—	23	5·2	—	2	—	—	1	—	1	4	0·9	77	17·6
Finsbury	83,212	—	21	11	—	—	—	1	12	—	—	45	5·6	—	6	—	2	2	—	—	10	1·3	145	18·0
City of London	17,129	—	7	3	—	—	—	—	1	—	—	11	6·7	—	—	—	—	1	—	—	1	0·6	32	20·3
East Districts.																									
Shoreditch	108,869	—	12	20	—	1	—	5	21	1	—	60	5·7	—	1	—	2	5	—	3	11	1·1	194	19·2
Bethnal Green	127,662	—	28	27	—	3	—	—	28	—	—	84	6·9	—	4	1	4	7	1	7	24	2·0	213	18·1
Stepney	273,265	—	67	39	—	4	—	2	24	—	1	137	5·2	—	11	1	1	9	—	5	27	1·0	407	16·2
Poplar	160,222	—	62	34	—	2	—	—	20	2	—	120	7·8	—	3	2	4	7	2	6	24	1·6	285	18·4
South Districts.																									
Southwark	186,941	—	126	43	—	4	—	2	28	1	—	204	11·4	—	3	2	4	8	—	5	22	1·2	342	19·2
Bermondsey	124,213	—	56	23	—	—	—	1	4	—	—	84	7·1	—	6	1	3	2	—	3	15	1·3	206	17·3
Lambeth	296,724	—	146	49	—	3	—	4	13	—	—	215	7·6	—	1	4	3	6	1	10	25	0·9	467	16·1
Battersea	167,338	—	55	41	—	—	—	2	13	1	—	112	7·0	—	1	—	—	4	—	2	7	0·4	221	13·9
Wandsworth	338,998	—	136	58	—	3	—	5	19	—	—	221	6·8	—	2	1	6	4	—	3	16	0·5	348	10·7
Camberwell	262,020	—	106	56	—	—	—	1	29	1	—	193	7·7	—	10	3	5	8	—	8	34	1·4	400	15·7
Deptford	109,182	—	54	19	—	—	—	—	16	—	—	89	8·5	—	10	—	2	1	—	2	15	1·4	149	14·0
Greenwich	96,037	—	41	33	—	2	—	—	10	—	—	86	9·3	—	8	—	2	1	2	—	13	1·4	132	14·1
Lewisham...	172,433	—	67	43	—	3	—	1	10	—	—	124	7·5	—	—	1	1	2	1	1	6	0·4	171	10·1
Woolwich	122,836	—	81	47	—	2	—	—	9	—	—	139	11·8	—	2	—	3	2	1	2	10	0·8	178	15·5
Port of London	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Surgeon-General: W. H. Norman to the *Vivid*, additional, for Plymouth Hospital. Fleet-Surgeons: J. McElwee to the *Egmont*, additional, for Malta Dockyard; and E. Cooper to the *Carnarvon*. Staff-Surgeons: A. I. Sheldon to the *Philomel*, on recommissioning, for service under New Zealand Government; R. R. Horley to the *Psyche*, additional, and on recommissioning; and J. Bourdas to the *Hearty*. Surgeons: B. Taylor to the *Triumph*, additional, for Hong-Kong Hospital; and C. M. R. Thatcher to the *Dreadnought*.

ARMY MEDICAL SERVICE.

Colonel M. W. O'Keeffe, on completion of four years' service in his rank, is placed on the half-pay list (dated April 23rd, 1914).

Lieutenant-Colonel Charles C. Reilly, from the Royal Army Medical Corps, to be Colonel, vice M. W. O'Keeffe (dated April 23rd, 1914).

ROYAL ARMY MEDICAL CORPS.

Surgeon-General Sir A. T. Sloggett, C.B., C.M.G., has arrived home from India on transfer to the Home Establishment.

Colonel R. W. Ford, D.S.O., has been appointed Deputy Director of Medical Services to the Aldershot Command.

Brevet-Colonel F. Smith, D.S.O., has been selected for appointment as Medical Inspector of Recruits on the Headquarters Staff of the Irish Command. Brevet-Colonel S. Hickson has been transferred to the London District.

Lieutenant-Colonel R. J. Windle has been selected for the higher grade of his rank for promotion. Lieutenant-Colonel J. C. Connor has arrived home from India for duty in the Irish Command. Lieutenant-Colonel M. P. C. Holt, D.S.O., has been appointed to hold charge of the Cambridge Military Hospital at Aldershot. Lieutenant-Colonel W. Turner has been appointed Deputy Assistant Director of Medical Services to the Welsh Division. Lieutenant-Colonel G. H. Barefoot has taken over charge of Queen Alexandra's Military Hospital. Lieutenant-Colonel J. H. Daly has been appointed Senior Medical Officer of the North Irish Coast Defences. Lieutenant-Colonel H. D. Rowan has been appointed to hold charge of King George V. Military Hospital at Dublin.

Major H. P. W. Barrow has arrived home for duty from Jamaica. Major H. M. Nicholls has been appointed to the Scottish Command. Major M. H. G. Fell has joined at Aldershot. Major P. S. Lelean has taken up duty at the Royal Army Medical College as Assistant Professor of Military Hygiene and Sanitation. Major E. T. Inkson, V.C., has arrived home for duty from India. Major W. L. Baker has been appointed to the London District. Major R. B. Black has arrived home on leave of absence. Major M. O. Wilson has joined the Eastern Command. Major W. J. Taylor has arrived home for duty from the Sierra Leone Protectorate. Major M. Leckie has been appointed to the Southern Command. Major G. J. A. Ormsby has been appointed to the Dublin District. Major F. E. Gunter has been transferred from the Military Hospital at Tidworth to the Royal Military College at Sandhurst. Major G. Baillie has been placed under orders to officiate in charge of the Military Hospital at Ipswich. Major J. F. Martin has been transferred from the Royal Military College at Sandhurst to the Aldershot Command. Major A. C. Adderley has been appointed Company Officer to No. 22 Company of the Royal Army Medical Corps at Wynberg, Cape Colony.

Captain W. C. Nimmo has been appointed Specialist in Midwifery and Diseases of Women and Children, and placed in charge of Military Families Hospital at Aldershot. Captain S. Field has arrived home for duty from Jamaica. Captain A. G. Wells has been appointed to the Scottish Command. Captain G. H. J. Brown has been appointed in charge of the Military Hospital at Aberdeen. Captain C. Bramhall has taken up duty as Adjutant of the Royal Army Medical Corps School of Instruction at Manchester. Captain D. Ahern has joined at Dublin. Captain O. R. McEwen has arrived home for duty from India. Captain R. M. Davies has been appointed to hold medical charge of the Detention Barracks at Headquarters, Pretoria. Captain W. A. Spong has arrived home on leave of absence. Captain R. J. C. Thompson has been appointed to the Southern Command. Captain H. C. Hildreth has been appointed to hold charge of the Military Families Hospital at Fermoy. Captain T. S. Eves has been appointed Staff-Surgeon at Lucknow. Captain J. T. McEntire has been appointed to the Irish Command. Captain P. G. M. Elvery has joined at Cairo for a tour of duty on the staff of the Military Hospital. Captain H. S. Dickson has been selected for appointment as Embarkation Medical Officer at Gibraltar. Captain R. Gale has joined the Public Health Department in Egypt. Captain C. W. Holden has joined the London District. Captain W. E. C. Lunn has arrived home from Lahore Cantonment. Captain W. E. Marshall has been transferred from the Military Hospital at Cork to Kinsale. Captain M. G. Dill has been appointed to hold charge of the Military Hospital at Ayr. Captain J. C. L. Hingston has been appointed Specialist in Dermatology and Venereal Diseases to the Burma Division. Captain M. J. Williamson has been transferred from the Military Hospital at Potchefstroom to Wynberg. Captain J. H. Douglass has been appointed Specialist Sanitary Officer in Sierra Leone Protectorate. Captain C. M. Nichol has been transferred from the Military Hospital at Cairo to Alexandria. Captain F. Worthington has been appointed to Gravesend. Captain J. H. Duguid has been appointed Specialist in Otology to the Military Hospital at Secunderabad Cantonment. Captain A. Shepherd has been transferred from the Military Hospital at Rangoon to Shwebo Cantonment. Captain N. Low has taken up duty at Colchester on transfer from the Military Hospital at Golden Hill. Captain J. R. Lloyd has been appointed to hold charge of the Section Hospital at the Crater, Aden. Captain R. P. Lewis has been appointed Specialist in Physical Training to the Aldershot Command. Captain G. W. G. Hughes has been appointed Specialist in Ophthalmology to the Military Hospital at Plymouth. Captain A. T. Frost has been transferred from the Military Hospital at Calcutta to Lucknow Cantonment.

Lieutenant E. G. S. Cane has been appointed Specialist in the Prevention of Disease to the Bombay Brigade and placed in charge of the Bacteriological Research Laboratory at the Military Hospital, Colaba. Lieutenant C. J. H. Little has been appointed to the Military Hospital at Rawal Pindi Cantonment. Lieutenant H. J. S. Shields has been transferred from the London District to the Military Hospital at Caterham. Lieutenant R. C. Carlyle has embarked for Malta. Lieutenant G. F. Allison has been appointed Company Officer to No. 8 Company, Royal Army Medical Corps, at York. Lieutenant D. Reynolds has been appointed to hold charge of the Military Hospital at Attock Cantonment. Lieutenant E. P. A. Smith has joined at Lucknow Cantonment.

INDIAN MEDICAL SERVICE.

Colonel P. Hehir has been transferred from the Sixth (Poona) Division and appointed to officiate as Deputy Director of Medical Services at Army Headquarters, Simla.

Lieutenant-Colonel F. J. Dewes has been appointed Civil Surgeon at Myingyan. Lieutenant-Colonel C. MacTaggart, C.I.E., has been selected for appointment as Officiating Inspector-General of Civil Hospitals in the United Provinces of Agra and Oudh, *pro tem.* Lieutenant-Colonel S. E. Prall has arrived home on leave of absence from India. Lieutenant-Colonel E. Hudson has been appointed Superintendent of the Central Prison at Allahabad. Lieutenant-Colonel R. H. Castor has been appointed to the Civil Medical Department in Burma. Lieutenant-Colonel R. C. Macwatt has been appointed Civil Surgeon at Ajmer. Lieutenant-Colonel A. R. S. Anderson has joined at Dacca.

Major J. G. P. Murray, officiating civil surgeon at Cuttack, has been granted three months' leave of absence. Major G. Y. C. Hunter has been appointed to the Jail Department in Bihar. Major A. H. Moorhead has been appointed to hold substantive medical charge of the 16th Cavalry. Major W. F. Harvey has arrived home on leave of absence from India. Major T. H. Delany has been appointed Civil Surgeon at Saran.

Captain H. Watts, officiating civil surgeon at Betal, has been granted three months' leave of absence. Captain D. G. Rai has been appointed District Medical and Sanitary Officer at Arcot and Nellore. Captain F. A. F. Barnado has been appointed to officiate in the Civil Medical Department, Bengal Presidency. Captain A. K. Lauddie has joined the Jail Department in Ludhiana. Captain R. F. Steel has been granted two years' leave of absence home from India. Captain H. R. B. Gibson has arrived home on leave of absence from India. Captain R. M. Barron has been appointed to hold substantive medical charge of the 32nd Lancers. Captain J. McPherson has been appointed an Agency Surgeon under the Foreign Department of the Government of India. Captain F. C. Rogers has been appointed Sanitary Officer at Kurnool. Captain W. R. J. Scroggie has taken up duty in the Civil Medical Department of Madras Presidency. Captain J. H. Burgess has been appointed Surgeon to the Governor of Bengal. Captain J. W. Illius has taken up duty as District Medical and Sanitary Officer at Arcot. Captain H. H. G. Knapp has been appointed Superintendent of the Central Jail at Rangoon. Captain W. H. Odlum has been appointed to hold substantive medical charge of the 30th Lancers.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Captain Samuel M. Sloan resigns his commission (dated April 25th, 1914).

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd East Lancashire Field Ambulance, Royal Army Medical Corps: Arthur Morrell Johnson to be Lieutenant (dated March 16th, 1914).

3rd Lowland Field Ambulance, Royal Army Medical Corps: Robert Balfour Barnetson to be Lieutenant (dated April 29th, 1914).

For attachment to Units other than Medical Units.—Samuel Macfarlane Sloan (late Captain, Special Reserve, Royal Army Medical Corps), to be Captain (dated April 25th, 1914); and Harold Seddon to be Lieutenant (dated Feb. 1st, 1914).

Attached to Units other than Medical Units.—Lieutenant John Graham to be Captain (dated Nov. 7th, 1913). Captain William W. Jones to be Major (dated Dec. 1st, 1913). Lieutenant Charles H. Caldicott to be Captain (dated Jan. 22nd, 1914). Captain Walter R. N. Smithard to be Major (dated March 17th, 1914). Captain William S. Paterson resigns his commission (dated April 29th, 1914).

TERRITORIAL FORCE RESERVE.

Royal Army Medical Corps.

Major William Watkins Jones, from the list of Officers attached to Units other than Medical Units, to be Major (dated Dec. 1st, 1913).

ARCHIVES DE MÉDECINE ET DE PHARMACIE NAVALES.

In the February number Dr. Chastang, principal medical officer of the French squadron in China, discusses the question of venereal prophylaxis, and tells us that the incidence of these diseases in that squadron (137 cases per 1000 men per annum) is double that (63) observed in the fleet at home. This greater prevalence he ascribes to two causes—the vast number of prostitutes everywhere in Asia, and the relative dulness of the lives of the seamen. He gives information regarding the prevalence of venereal disease in Japan when he quotes figures showing that in 1911 48,105 public women were examined on 2,839,810 occasions, when 34,538 cases of gonorrhœa and its sequelæ were observed, 17,561 of soft chancre, and 3837 syphilitic manifestations (each woman examined some 59 times, and the relative prevalence of disease—gonorrhœa 62, soft sores 31, and syphilis 7 per cent.). Considering that to some extent the men are driven to associate with prostitutes for want of other amusements, Dr. Chastang recommends games to them—football, gymnastics, tennis—and tells us that one group of men in China ceased to develop cases of venereal disease when their officers incited them to play games. As to therapeutic prophylaxis, it was ordered in the French navy in 1909, but medical officers have not been busy to see it was carried out. Encouraged by their principal medical officer several French naval doctors in China have taken more hold of this question, besides they say they have found it well handled in the British and German ships lying alongside them. So now proper arrangements are made, the men who contract venereal disease, but have not reported their risk and taken the treatment, are punished, and we are given stories to read of the immediate decrease of cases, very similar to those that were so frequently being told from the United States Service a few years ago. Dr. Chastang is of opinion that venereal prophylaxis will always be successful if the ship's medical officer is convinced it is a good thing and determines it shall be used. Its success then in any ship might well be considered as a claim by her medical officer for his promotion. At the end of the number are reports of a great many cases of tropical fevers of uncertain origin, spoken of as three, four, seven, and ten day fevers, and one is struck by the great need there is for adding a blood count, at least a differential leucocyte count, to every clinical report on a tropical or any other fever. We have heard that in South-Eastern Europe women are definitely assigned by the War Office to some of the supply services on mobilisation, but what is the French Admiralty doing (p. 157) issuing orders about "Rest for women before childbed." Perhaps of course it is to apply only in the dockyards, not in the service afloat.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on April 21st, the Medical Director-General of the Navy in the chair, the sum of £40 was distributed among the several applicants.

ROYAL INSTITUTION.—On Tuesday next, May 5th, at 3 o'clock, Professor W. Bateson will deliver the first of two lectures at the Royal Institution on (1) Double Flowers and (2) the Present State of Evolutionary Theory. The Friday evening discourse on May 8th will be delivered by Professor Karl Pearson on Albinism in Men and Dogs, and on May 15th by Professor Frederick Keeble on Plant Animals: a Study in Symbiosis.

Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

LIVERPOOL.

Tropical Medicine.

WITH a view to carrying on research work in its various branches the School of Tropical Medicine intends to establish a permanent laboratory on the West Coast of Africa. The colony of Sierra Leone has been selected for this purpose. It possesses special advantages for such work, as there is ample material for the study of tropical diseases, and being one of the nearest tropical colonies to England, is accessible more rapidly and cheaply than any other suitable place in the tropics. It is hoped that the laboratory will act as a base from which expeditions may be despatched from time to time to other regions of tropical Africa.

St. Helens Hospital.

The annual meeting of the St. Helens Hospital was held on April 23rd. The Mayor (Sir David Gamble), who presided, referred appreciatively to the work of their first and late President, Colonel W. W. Pilkington. It was unanimously agreed to ask Mr. Richard Austin Pilkington to succeed his father as President. The forty-first yearly report stated that the income for the year amounted to £5919, and the expenditure to £5145. The 1*d.* a week subscription showed a gratifying increase; £4515 had been raised in this manner, being £376 in excess of last year. The number of patients admitted during the year was 1228, compared with 1179 patients in hospital in 1912.

Doctor's Widow's Action.

Mrs. Amy Louisa O'Donoghue, the widow of Mr. William Charles O'Donoghue, brought an action against the Cheshire Lines Committee to recover damages for herself and her infant children in respect of the loss of her husband. The case was tried at the Liverpool Assizes on April 23rd before Mr. Justice Ridley. In December last Mr. O'Donoghue was returning to Liverpool from Manchester by train. He was seized with sickness and put his head out of the window for a few minutes. While he was in this position a local train passed on an adjoining line and an open swinging door in one of the carriages struck him on the head and killed him instantly. Mr. Rigby Swift, K.C., M.P., for the plaintiff, said everyone knew there were certain risks about putting one's head out of a carriage window, but a railway door carelessly left open was not a risk which must be reasonably contemplated. There were no circumstances which could more strongly justify a passenger acting in that way than the circumstances related in this case. Mr. Gordon Stewart, K.C., M.P., for the defence, argued that the deceased had been negligent in thrusting his head so far out of the window. Mr. O'Donoghue was subject to train sickness and ought to have been prepared for its oncoming and should have gone to the window on the near side where no trains would pass. His lordship said he could not get himself to see in what duty the railway company had failed in regard to a passenger in another train when nothing could have happened to him if he had kept his head indoors as he was intended to do. Mr. Swift argued that

the doctor's action was not a negligent one, because he happened to be sick, but that was not the way to measure the reasonableness of the act. "I have been in steamboats, and I daresay members of the jury have too," went on his lordship, "when five or six people in the same cabin have all been sick one after the other. Did any of them take the trouble to go to the side? No, they were all sick in the presence of each other. It cannot seriously be put forward that because there were others present a man is justified in taking on himself the risk of thrusting his head through the window. If the train were stationary and no other train was approaching, of course a gentleman would take means to avoid giving trouble to his fellow passengers." The jury found that the defendants had been guilty of negligence in allowing the door to be open, and that the deceased was not negligent in putting his head out of the window and keeping it there in the circumstances. They awarded £2750 damages in all, £1250 for the widow and £500 for each of the three children. Mr. Justice Ridley: "I entirely disagree with the verdict, but I will grant a stay without any terms."

April 28th.

BRISTOL AND WESTERN COUNTIES.

Lord Mayor's Hospital Sunday Fund.

THE total sum collected up to now amounts to £2041 4*s.* 1*d.*, a figure only exceeded on two previous occasions, both of them in the last decade. There are still a few collections to come in, so that it is possible that this year's total may reach second place. In view of the very natural apprehensions that were expressed as to the effect of the National Insurance Act on this and similar funds, so successful a result is particularly gratifying.

Tuberculosis Dispensaries in Bristol.

The Bristol tuberculosis scheme will shortly take a fresh step towards completion. A second dispensary is to be opened in the east central district to supplement the work that is already being carried on at the municipal dispensary in the south-west of the city. This will necessitate the appointment of a second whole-time tuberculosis officer.

Medical Inspection of School Children in Gloucestershire.

At a recent meeting of the Gloucestershire county council the remarkable statement was made that only about 40 per cent. of the children examined were normal. This raises the question, "What is normal?" It was not this, however, that agitated the council, but a straight hint from the Board of Education to the effect that the small percentage of reported children securing successful treatment rendered some better system necessary if certain maximum grants were to be secured. Something is proposed in the way of dental treatment, and an extension of the plan by which the recommendations of the school medical officer are carried out by visiting nurses is also mooted.

University of Bristol Colston Research Society.

The subscriptions to this society during the past year amounted to £503, and a sum of £300 was handed to the University for expenditure on research. The committee controlling the allocation of these funds to various researches has been enlarged by the addition of six members of Senate, and the president of the society is to be president *ex-officio* of the committee during his year of office.

Winsley Sanatorium.

At the annual meeting of supporters a curious state of affairs was disclosed in regard to this institution. As is known, it was opened some years ago as a private venture, with a certain number of its beds reserved for public bodies who contributed proportionate sums to its upkeep. Gradually the demand for this type of bed has increased, and it was recently proposed that more beds still should be allotted to public authorities. This proposal was carried, in spite of the strong disapproval expressed by a section of the managing board; but the execution of the plan was delayed by a request from the Charity Commissioners for the title deeds of the sanatorium, backed by a refusal on the part of the Local Government Board to sanction loans to public bodies to pay for the sanatorium beds which those authorities were under contract to purchase, unless the request of the Commissioners were acceded to. On inquiry the sanatorium management found that this difficulty did not arise from any dissatisfaction on the part of the Commissioners or the Board with the general management of the institution; however, the obstacle has not yet been removed. Apart from this the financial position is excellent; some very necessary extensions are being carried out, and a large legacy will allow of the erection of suitable premises for the resident medical officer. Since its opening there have been 1124 patients admitted to the sanatorium, 983 of whom came from Bristol. Of those discharged during the past year 53 per cent. were certified fit for some work.

Teignmouth and the Mussel Trade.

Dr. F. C. H. Piggott, medical officer of health for Teignmouth (Devon), in his annual report for 1913, states that the death-rate was 12·98 per 1000 and the birth-rate was 13·30. 50 per cent. of the children born during the year were vaccinated. Dr. Piggott, in alluding to the removal of the "embargo" on mussels gathered from the river Teign, mentions that the Fishmongers' Society had recommended that mussels should have a certificate stating that they had been "relaid" at Saltby for seven days, and if this certificate was not forthcoming the fish should be seized and condemned. He adds that there seemed to be a few reckless individuals who had distributed uncleaned mussels locally from the upper part of the river Teign, and these people by their selfish action had imperilled the whole trade.

The late Mr. Arthur John Awdry.

Mr. Arthur John Awdry, honorary medical officer to the Berkeley Hospital, who died at his residence, Berkeley, Gloucestershire, on April 23rd, from influenza followed by pneumonia, received his medical education at Birmingham University, and qualified L.R.C.P. and M.R.C.S. in 1901. He shortly afterwards joined his brother, Dr. W. R. Awdry, in partnership at Berkeley. He was extremely popular, and sympathy with his family is felt throughout the neighbourhood.

April 28th.

SCOTLAND.

The National Insurance Act and Aberdeen Doctors and Chemists.

ON April 22nd a largely attended meeting of Aberdeen doctors who are on the panel was held for the purpose of considering the deduction of 10 per cent. made from the payments to doctors under the National Insurance Act by the Aberdeen Burgh Insurance Committee. The finding of the

meeting was ultimately embodied in the following resolution :—

That the Panel Committee be instructed to take legal advice in reference to the matter of deduction and to report.

It was also agreed to protest against the method of crediting to the Insurance Committees their share of the Medical Benefit Fund of Scotland. With regard to the county of Aberdeen, a final settlement has not been made with the doctors in respect of their payments, but it is understood there is still some money in hand, and no difficulty such as that existing in the city is anticipated. In the county the "floating sixpence" is available. In Aberdeen this has been absorbed to meet the drug bill, and a further total deduction in pharmaceutical charges of £620, or nearly as much as the 10 per cent. docking of the doctors' fees, has been made on the accounts rendered by the chemists, the chemists thus being 10 per cent. short of their legitimate payments. The amount available is £5000, the chemists' accounts have come to £5615, and there has been paid to chemists the sum of £4995.

Chancellorship of the University of Aberdeen.

At a statutory meeting of the general council of the University of Aberdeen held on April 18th, the Earl of Elgin and Kincardine was elected Chancellor of the University of Aberdeen. There were no other nominations. Lord Elgin has been pleased to accept office.

Diphtheria in Inverness.

Within the last fortnight a smart outbreak of diphtheria has occurred in Inverness, 26 cases having been notified. A large majority of these cases were found to have had their milk from one dairy, and the outbreak has been definitely traced to two women employed there. The bacillus was found in the noses of those women, who are now segregated and under medical care, though they have not developed the disease themselves.

Proposal for Sick Children's Hospital in Dundee.

The committee formed to make full inquiry into the whole question regarding a new sick children's hospital for Dundee have after consideration come to the conclusion that for the present the scheme is impracticable. Sufficient funds, in their opinion, would not be forthcoming, and the committee recommend that the directors of the infirmary be approached to see what accommodation can be provided at the infirmary.

Medical Service in Skye.

A deputation of the Highlands and Islands Medical Service Board visited Portree on April 23rd and had an interview with representatives from the seven parishes in Skye. Evidence was given on the financial positions of the Martin Hospital, Uig, and the Mackinnon Hospital, Broadford, it being stated that the latter is altogether dependent on outside aid. It was suggested that besides the fever hospital at Portree another is required to provide the necessary accommodation for the needs of the district and of the growing iron ore industry which is now established at Raasay. Nursing in the various districts was also discussed. Locomotion is very difficult, many of the roads being not passable for bicycles. Inquiry was also made into the housing accommodation available for doctors and nurses, and also into the need for providing a motor ambulance to be stationed at Portree, to be used for the conveyance of patients to the various hospitals.

April 23th.

IRELAND.

Irish Medical Association.

THE annual meeting of the Irish Medical Association has been arranged for Wednesday, June 3rd, and is to be held in Dublin. Dr. F. W. Kidd has accepted nomination for the presidency. He has had long experience in the working of the association, and he holds the full confidence of the profession.

Royal College of Physicians: Honorary Fellowship for Sir Arthur Chance.

On April 23rd Sir Arthur Chance, the well-known Dublin surgeon, was formally admitted to the honorary Fellowship of the Royal College of Physicians of Ireland. The ceremony took place in the College hall, Kildare-street, in the presence of a large assembly. The registrar of the College, Dr. Percy Fitzpatrick, introduced Sir Arthur Chance to the audience in a sympathetic speech, in which he made special allusion to the splendid work done by their new Fellow as a member of the General Medical Council. The President, Dr. C. E. Fitzgerald, then formally admitted Sir Arthur Chance to the Fellowship, afterwards investing him with the appropriate gown, and spoke in eloquent terms of the esteem and affection with which he is regarded by his colleagues.

The Friendly Societies and Certification.

At a meeting of the executive committee of the Orange and Protestant Friendly Society held on April 21st a resolution was passed recommending that for the purposes of certification whole-time doctors should be appointed to certify those incapable of work, always provided that a number of certificates be apportioned to each society, and that the society shall have the right of nominating candidates for such appointments.

Meath Hospital.

The annual meeting of the Meath Hospital and co. Dublin Infirmary was held recently in the hospital. The report stated that the debit balance against the hospital had increased during the year from £8509 7*s.* 5*d.* to £9211 14*s.* 1400 patients had been treated in the wards during the year and 8106 accident cases attended. The dispensary cases numbered 9924. The average number of beds occupied was 117·43. An appeal was made for funds to build a new operating theatre.

Poliomyelitis in County Tyrone.

At a meeting of Cookstown rural council held on April 25th four deaths from poliomyelitis were reported, three being members of one family and the fourth a cousin, all in the Stewartstown dispensary district. Three other cases are doing well. The houses, the church, and the school, where the children were present, have been disinfected. It was decided to remove all cases to the hospital.

April 28th.

PARIS.

A Hunger Strike in the Paris Asylums.

THE Conseil Général de la Seine, on Dec. 24th, voted that the hospital staffs should be allowed to get their evening meal away from the hospitals, authorising for this purpose a per capita allowance of 85 centimes. The object of this arrangement was to permit of married outside employees having one meal daily with their families. As, however, four months elapsed without any attempt being made to bring this ruling into force, and as the direction of the Assistance Publique, notwithstanding repeated requests by the members

of the syndicate of hospital nurses, refused to state at what date they would give effect to the ruling, the syndicate, weary of waiting, decided on a hunger strike in the asylums of Vaucluse, Villejuif, Maison-Blanche, and St. Anne, and 900 male and female nurses accordingly refused their evening meal. Out of courtesy to the catering staff they informed them that their action was intended as a strike, and not in any sense as a mark of dissatisfaction with the culinary service. The strike lasted four days, after which the Assistance Publique agreed to fix a date at which the new regulation should come into force.

A Backward Step in the Crusade against Alcohol.

Notwithstanding the efforts of the medical profession to obtain from Parliament the regulations necessary to repress alcoholism, a regrettable backward step has been taken by the Chamber of Deputies. On the eve of a new election the Chamber has voted for the suppression of the wine-seller's licence—that is to say, of the permit required by law for opening a drinking shop, which entails the payment of an annual toll. Besides the fact that by the loss of this toll the Budget will lose 38 millions of francs yearly, no restraint is any longer placed on the establishment of new drinking shops. Bills for limiting the number of these places, by controlling the establishing of new ones, have been brought many times before Parliament, but as often rejected, though each time with a decreasing majority, so that a hope was entertained that such a Bill would one day pass. The profound dismay at the action now taken may therefore be understood. Unfortunately, on the eve of an election the deputies feel the need of securing at all costs the support of the publicans, whose premises for the most part serve as meeting places where the chances of future elections are discussed. Consequently, at the end of its term, every four years, the Chamber of Deputies rarely fails to commit some folly of this kind, or to accept some outrageous expenditure in favour of interested localities whereby the members hope to gain the support of the electors. The Bill, however, will not become law until accepted by the Senate, whose members, being nominated by a limited constituency and for nine years, are less dependent on the discussions of pot-house politicians; and it is hoped that it will reject this Bill, whose authors will by then have received the benefit of it in the shape of re-election, which for most of them is all that matters. Nevertheless, the Anti-Alcohol League has forwarded to the Senate an energetic protest, in which its president, Professor Debove, points out the dangers that would ensue should the Bill become law.

April 27th.

SOUTH AFRICA.

Sanitation at the Mines: Report of Surgeon-General Gorgas.

THE Transvaal Chamber of Mines has just issued the report of Surgeon-General W. C. Gorgas, late chief sanitary officer of the Isthmian Canal Commission. This officer, it will be remembered, was invited by the Chamber to investigate the causes of the high death-rate from pneumonia among the native labourers, and to make such recommendations as might appear necessary for the reduction of the mortality and the improvement of the general sanitary conditions of the mines and compounds. In his investigation, which began in December last, he was assisted by Major R. E. Noble and Dr. S. T. Darling, both on the staff of the Isthmian Canal Commission.

The report is an interesting one, and considering the short time at Surgeon-General Gorgas's disposal he was evidently able to make a fairly thorough survey of the conditions on the Rand. In the course of the report he points out that the uniformity with which pneumonia attacks preponderatingly the recently arrived native is as pronounced on the Rand as it is on the Isthmus of Panama, and that this seems to be the only generalisation yet drawn with regard to the incidence of pneumonia of epidemiological value. This indicates that the question of immunity is the most important element in the causation of the death-rate. In the construction of the Panama Canal in its incipiency there was much the same trouble with pneumonia amongst the negroes as amongst the natives in the mines of the Tranvaal, and the death-rate for pneumonia among the black employees of the Canal Commission in 1906 was 18·74 per 1000, higher than the death-rate for this disease among native employees in the proclaimed labour district of the Transvaal for any year since. During the first few years on the Isthmus the negroes were housed in barracks containing 84 men, and of such dimensions as to give them about 30 feet each of floor space. In 1907 the Commission allowed the negro labourers to scatter out along the line of the canal and to build huts and bring out their families. There was a sudden and permanent drop in the death-rate from pneumonia, due, in Surgeon-General Gorgas's opinion, mainly to the scattering of the natives, and he argues this step should if possible be taken on the Rand. He points out that the most serious sanitary defect on the Rand is the matter of housing.

Conditions of Housing.

The native quarters are much too crowded. The native labourer has generally about 200 cubic feet of air space, or about 14 feet of floor space; the occupants are thus in close personal contact. and the spread of any infectious disease is largely increased. This applies particularly to pneumonia, tuberculosis, and cerebro-spinal meningitis. The great American sanitarian thinks that if the native labourers were to be placed in individual buildings with their families it would have the same result as on the Isthmus. It reduced the death-rate from pneumonia there in the course of a year from 18·4 per 1000 to 2 per 1000. It would probably reduce the Transvaal rate of 15 per 1000 (the highest monthly rate for 1913) to 2 per 1000. If this is not considered feasible at present the nearest approximation to it should be attempted. What does strike him as feasible is to extend the family locations, and instead of spending large sums in recruiting endeavour to attract a permanent force of married men who would live in the locations and be always available as a source of labour for the mines. Such locations should be self-supporting, and would correct the unsatisfactory health conditions of the compounds by giving more floor space *per capita* to those who continue to live therein. If it is not possible to put the natives into huts with their families, he recommends that they should be put into huts without their families, arranged so as to give each native 50 square feet of floor space. If huts are not practicable, they should be put into barracks, but the latter should be divided into small rooms and arranged to give each native 50 square feet of floor space.

Surgeon-General Gorgas notes that the compounds appear to be well kept, but that in the native living quarters the very opposite is the case.

Food was always present in dirty vessels in considerable quantities, old clothing and wearing apparel of all kinds, soiled and dirty, littering up everything, and litter of all kinds was stowed away under the sleeping platforms.

He does not think that much in the way of correction can be done in the present overcrowded condition of the barracks.

Immunisation.—Death-rates.

He considers that the question of immunisation for pneumonia as recommended by Sir Almroth Wright should be more carefully looked into, and he suggests that it would be useful for the experimental inoculation against pneumonia to be continued, using the different strains of pneumococci. When inoculating natives he considers that at least one-half at present should be kept as controls. He points out also that the death-rate from enteric fever is far too high, and expresses the opinion that it would be abolished altogether if all native employees were vaccinated for enteric fever as a routine procedure.

The report deals at length with the statistics showing the prevalence of pneumonia and other diseases amongst natives. The death-rate among natives employed on the mines and on industrial works in the Transvaal in 1903 was 71·7 per 1000; in 1912 for some 300,000 employees in the same area it was 26·84. "This rate," says the report, "is still very much too high, as we are considering men in the prime of life." According to the Native Affairs Department, the total death-rate in this year from diseases was 22·6 per 1000, the four highest being pneumonia 9·8, phthisis 5·4, meningitis 1·3, and enteric fever 1·1. It is pointed out that—

these four diseases are all more or less infectious and contractable. If they could be gotten rid of entirely, the rate for 1912 would be reduced to 5·0 for all other diseases. While the eradication of these diseases cannot at present be accomplished in this or any other community, probably by proper hygienic measures a very appreciable reduction could be accomplished.

Summary of Recommendations.

In a summary of the recommendations, the report states:—

Of the sanitary recommendations, I consider that of increasing the floor space to about 50 feet the most important and pressing, and by far the best way of doing this to be the village hut system and the introduction of families. If this particular method cannot be carried out, to come as near it as possible. The second in importance I consider the improvement in the hospital system and the care of the native sick. This can be best carried out by a central hospital. If a central hospital is not possible, by such concentration of hospitals as is possible. The third in importance is the establishment of a central sanitary bureau or department under the Chamber of Mines, the head of this department to represent the mines on all sanitary questions. The revision of the present regulations regarding matters of sanitation, so that the sanitation of the mines might be accomplished by the authority of one official of the Government or municipality, instead of with five different interested parties as is now the case.

In regard to these recommendations, it will be remembered that Sir George Turner, when medical officer of health for the Transvaal, on more than one occasion came into conflict with the mining houses on the ground that insufficient air space was provided for native labourers, and there can be little doubt but that it is high time that steps are taken to remedy the evil. On more than one occasion this question has been referred to in THE LANCET. It is very doubtful whether the village system could be greatly extended, and even if it were possible it is doubtful whether a permanent force of skilled workmen would be always available as a source of labour for the mines. Surgeon-General Gorgas has overlooked the fact that the average kaffir will not work for more than about six months in the year, and that considering the nature of his work on the mines it is perhaps as well that he does not do so. It will be generally agreed, however, that the strictures passed on the existing native quarters are fully justified, and that these buildings call for alteration with a view to remedying their overcrowded condition. Also no one will find reason to doubt the wisdom of the recommendations made in respect of the mine hospitals. The need for improvement here has long been felt. The staffing of these hospitals is also unsatisfactory, and it would be well if they could be staffed with coloured female nurses instead of orderlies. This, however, could not be done at once for lack of trained coloured nurses. With the recommendation for the centralisation of sanitary control under one authority no one can quarrel. This has already been urged in these columns. It is doubtful, however, whether the Chamber of Mines should directly have anything to do with it. What is required is a board of health representing the municipalities, the Chamber of Mines, the Department of Native Affairs, the Department of Mines, the Department of the Interior, and the Provincial Government. This board should be given special rating powers, and should control through a medical officer of health the sanitation of the whole area. Something of this sort is what Surgeon-General Gorgas probably means, but he does not say so definitely.

Surgeon-General Gorgas and his staff are to be congratulated on the work they have accomplished, and it is to be hoped that his recommendations will be given trial as far as practicable.

March 31st.

DONATIONS AND BEQUESTS.—By will the late Mr. Ernest Dresden, of London and Newmarket, left £5000 to the Middlesex Hospital and £1000 each to the Rous Memorial Hospital, Newmarket; the County Hospital, Bury St. Edmunds; the Infant Orphan Asylum, Wanstead; the Cancer Hospital, Fulham-road, S.W.; and the Hospital for Children, Great Ormond-street.—The late Mr. Frederick Burton, of Pendleton, Manchester, and Gwaynynog, Denbigh, has left £2000 to the Salford Royal Hospital and £1000 each to the Manchester Royal Infirmary and St. Mary's Hospitals, Manchester, and £500 to the Denbigh Infirmary.—Under the will of the late Mr. Henry Skeate White the testator left £200 each to the Royal Ear Hospital, Soho; the Royal Dental Hospital, Leicester-square; the Royal Hospital for Incurables, Putney; and the British Home and Hospital for Incurables, Streatham.—The late Mr. David Sturrock has left £1000 to the Glasgow Western Infirmary for the purpose of endowing a bed to be called the David Sturrock bed.—King Edward's Hospital Fund for London has received £500 from the Clothworkers' Company.—The late Dr. William Watts Thetford left by will £100 to the Royal Medical Benevolent Fund Society of Ireland.—Mr. L. E. Raphael has presented the Jewish board of guardians, of which he is a member, with a gift of £2500 for the purpose of providing sick children with treatment in hospitals or at the seaside.—The late Mr. Francis Arthur Farrell, of Dublin, has left £200 each to the Hospital for Incurables at Donnybrook, St. Mary's Asylum for the Female Blind, Dublin, the Mater Misericordiæ Hospital, St. Vincent's Hospital, and St. Michael's Hospital, Kingstown.

Correspondence.

"Audi alteram partem."

LUNACY IN EGYPT.

To the Editor of THE LANCET.

SIR,—A most interesting problem in the treatment of the insane is at present being worked out under very trying conditions in Egypt. About 20 years since a start was made by Dr. F. M. Sandwith at the disused palace of Abassia near Cairo. The palace was badly adapted for the reception of lunatics, but by degrees it has been brought into shape, fresh buildings have been added, and quarters for the medical staff have been built, but every visit to the place impresses the visitor with the great difficulties, structural, economic, and administrative, which have had to be overcome. The governing authorities looked upon the whole matter as a nuisance, because there were constant calls for money for work which they considered unremunerative. There was at that time no real lunacy department, the asylums being under the Department of Public Health. Much was attempted and a great deal done by Dr. J. Warnock, who for 18 years has been struggling against enormous odds. It is wonderful what he has managed to do. The method of the working of the large and crowded asylum is splendid, and to this I shall refer later. His work now stands a good chance of recognition and, what is more to him, of receiving genuine support. On April 1st the then head of Public Health in Egypt handed over the asylum work to the Ministry of the Interior. Dr. Warnock continues to be the head of Abassia, and will also be Director in Lunacy for Egypt. It is anticipated that some definite sums of money will be specially provided for the regular development of the care and treatment of the insane.

The overcrowding and overwork have caused delay in producing the annual reports, so that the reports for the years 1911 and 1912 have only just been received. During that time the chief matter of importance has been the starting of what one may call the relief asylum at Khanka, on the other side of Cairo. This is only begun, but in due course will develop into a very large asylum. Another matter of general importance is that the criminal lunatics have been removed from Tura to Abassia. This involves extra work and extra risks to the officers and staff, and I cannot help thinking this can only be a temporary measure, for the English experience is that criminal lunatics should be separated from the non-criminal ones.

The great difficulty of obtaining trustworthy nurses, male and female, is felt. The lack of Egyptian women who are in any way trained or trainable makes it imperative that the backbone should be trained English nurses. This deficiency, after years of effort on the part of Dr. Warnock, has been partly met this year by three English asylum nurses being obtained. As is pointed out, too, the pay at present for the men is not sufficient to attract those who are suitable. When it is shown that the majority of the nurses can neither read nor write, nor in fact recognise the numbers of the doors of the bedrooms, it will be seen how grave is the task of working with such material.

Special attention is called first to the overcrowding of both the parent and the second, or relief, asylum. Many patients have to sleep on the ground, though this certainly is not felt to be a hardship by the natives. Next, as a result of the crowding, patients have to be discharged as soon as they cease to be actively dangerous. One consequence of this has been that a certain number of these unstable persons have committed crimes, and it has been said that the Abassia patients have contributed to the serious crimes in Cairo; but Dr. Warnock shows that this is not true, and that criminals have found it convenient to plead past or recent lunacy and thus have hoped to escape their full punishment. Doubtless some of the convalescent patients have committed crimes, and as so many of the patients admitted have been suffering from abuse of alcohol or hashish, it is not surprising that on their release they return to the habit and again become dangerous.

Another point of interest is the very large number of recent injuries from which the residents in the asylum suffer. The numbers would astonish the English Commissioners. They are partly to be attributed to the untrained attendants and partly to the infusion of criminal lunatics and the hashish maniacs. The number of sufferers from pellagra is noteworthy, and Dr. Warnock contributes interesting pathological observations on the post-mortem changes which he found. He is certainly convinced that maize is not the one and only cause of the disease.

The reports give in most elaborate detail all the facts and statistics which can be wanted, and must have involved an enormous amount of work. Tables are given showing the admissions and discharges, the forms of malady, duration of disorder, the causes of the disease, and the cost of maintenance, with all the details of the costs of administration. One can only admire the clear and definite way in which every part is explained.

One, therefore, feels now that there is a fair prospect before the Director of Lunacy that this work, so well started and developed, will be continued under his direction until the whole of lunacy can be treated along fixed and definite lines. The two asylums are not enough, for though the relief one at Khanka will in time receive 1000 patients, yet that will not suffice for all Egypt. In the report it is shown that many insane pass through the various general local hospitals, but the medical officers at these institutions have as a rule a very limited experience of insanity, and are not competent to treat or even advise as to the need of asylum treatment for the cases which are sent to them. It is certain that there ought to be a well-established criminal lunatic asylum not far from Cairo, and probably some hospital asylum for the paying cases and for Europeans. There is no fully recognised system of lunacy law in Egypt, and for this there is special need of the practical experience of Dr. Warnock.

Before concluding this letter on Egyptian lunacy one must make a special reference to the asylum at Khanka, under Dr. H. W. Dudgeon, who has had over ten years' experience in Egypt. A large farm has been taken, and it is determined to try to work this farm by quiet and harmless patients so that it shall produce the vegetables for both asylums, and later possibly produce profitable crops such as cotton. The space is ample. The general want being water, it is hoped that soon communication will be established by the Irrigation Department with a canal near, thus giving a more regular supply at all seasons. At Khanka the difficulty of overcrowding exists, for with ample space the

buildings are still wanting. The administration is difficult, for though they receive the quiet cases, yet as soon as these become useful workers the pressure of space requires that they should be discharged, though it would be better for their future if they could remain longer under care. The isolation of Khanka is a trial for the resident officers and their families which makes prolonged holidays necessary.

I must conclude by expressing satisfaction at the work done and the prospect of its further encouragement by the Government.

I am, Sir, yours faithfully,

Devonshire-place, W., April 21st, 1914. G. H. SAVAGE.

THE UNIVERSITY OF LONDON AND EXTERNAL DEGREES IN MEDICINE.

To the Editor of THE LANCET.

SIR,—Your editorial note to Dr. A. Percy Allan's letter in THE LANCET of April 18th challenges a reply which has been delayed owing to my absence from town. In that note you reaffirm the correctness of a statement made in your leader of March 21st which had been so definite that I had concluded that you had received information not at my disposal; but the sole authority which you give for the statement is the report of the Commission, and I submit with all courtesy that you have misread the latter.

The statement to which I refer reads thus in your leader of March 21st: "..... the spokesmen from all the London medical schools but one, and a number of other witnesses, urged the abolition of the external degrees in medicine." The reference in the report, which you give as your authority in your editorial note, runs thus: "Moreover, with the exception of the witnesses from St. ..... Hospital Medical School, all the witnesses from the London medical schools, *who referred to this matter*, and a number of other witnesses, urged the abolition of the external degree in medicine."

I submit that the omission of the qualifying clause, which I have italicised, makes your version much more sweeping than that of the report; and that it is not supported by the facts is evident from an inspection of the footnote to the reference, in which the schools which are instanced as having given hostile evidence are specified by name. Omitted from this list are not one but four schools, whose importance may be measured by the fact that they contribute 547 University students as against the 454 such students contributed by schools which are included in that list. Dr. Allan will be pleased to know that "Guy's" is not named with the hostile schools; in fact, the representatives of Guy's made it clear that there was a majority at their school in favour of the retention of external degrees, but this is not mentioned in the report of the Commissioners, who are anxious to draw attention only to the opinions of critics hostile to the external side. Indeed, they are apparently not above twisting expressions of hostility out of evidence which does not sustain that imputation, as in an instance I give immediately below.

The "other witnesses" referred to both by the report and your leader are also specified by name in a succeeding footnote in the report. As so much has been made of these it is of some importance to analyse this list in turn. There are seven names cited. The first is Lord Moulton. A perusal of his evidence, which in its general tenour is an impressive appeal for continuance of external degrees, shows that the only countenance for including him in a list of "witnesses who urged the abolition of external degrees in medicine" is to be found in his admission that "tuition and residence" are necessary in the case of medical students who cannot qualify by "private study." But he nowhere says that the tuition and residence must be restricted to London schools.

I have before me as I write a letter from Lord Moulton, dated April 20th, 1914, in which he says: "I remember nothing that I said in my evidence before the Commission which could justify the use of my name as supporting the abolition of the external degree in medicine." I submit, therefore, that Lord Moulton is quite improperly included in this list, and I have his authority for publishing the categorical denial quoted above. Of the remaining six witnesses, five are Professors or Fellows of University College. This is surely a noteworthy preponderance, and inevitably leads to the inquiry whether this college has any material interest in the suppression of the external degrees in the University, an interest which would make this collective hostility of its members a mere act of laudable patriotism towards their college, but which would at the same time necessarily detract from its moral force as a protest against those degrees. There is abundant evidence for answering that inquiry in the affirmative.

"It is openly avowed," says Dr. Waller (himself a purely internal representative on the Senate), "on the internal or College side that the existence of the external side of the University of London is an intolerable hindrance to their development. To the disinterested spectator the position of the Colleges now incorporated in the University of London of 1898 has been one of steady progress towards the acquisition of an unimpeded monopoly. ..... During the last ten years the Colleges have become incorporated by the University, and have steadily drawn the clothes over to their side of the bed and steadily complained of the intolerable pretensions of their external bedfellow. In this respect we may certainly admit that the policy of University College has been a continuous and unchanging policy."[1]

I claim to have shown that the extent of the opposition to the retention of the external degree in Medicine has been greatly exaggerated, and, further, that where it exists it is very largely an interested opposition. May I, in concluding, compliment you on the generosity of your reception of my letters, a generosity which has, indeed, justified your proud motto of "Audi alteram partem." I am, Sir, yours faithfully,

Wimpole-street, W., April 27th, 1914. E. GRAHAM LITTLE.

THE EFFECT OF THE INSURANCE ACT ON NATIONAL NUTRITION.

To the Editor of THE LANCET.

SIR,—May I put in a plea for a more careful consideration of the economic effects of the Act than it generally obtains in the medical press? It is often forgotten that the problem of the public health is mainly economic. If the poor were well-to-do their death and sickness rates would rapidly fall to the level of those of the classes above them; and the question that confronts a statesman is not to deal

[1] A Short Account of the Origins of the University of London. By Augustus D. Waller, F.R.S., LL.D., Member of the Senate, late Dean of the Faculty of Science in the University of London. (See p. 28.)

with disease, leaving poverty unrelieved, but to do all he can to abolish poverty in the sure knowledge that the rest will follow of itself.

Free trade rapidly gave to England the lowest death-rate of any industrial or populous country in the world, and the lesson it teaches is that if you would make a people healthy you must raise real wages (i.e., make necessaries plentiful) by freeing production; and that the distribution of these necessaries may be left to natural agencies. It follows, in accordance with Dr. Farr's well-known maxims, that if a malignant government aimed at lowering the health of the community its readiest method would be to tax production.

Apart from the degradation of compulsion applied to a class because it is poor, the blot on the Act is the 5*d*. weekly per head said to be given "free" to the beneficiaries. The older economists knew and preached that the State cannot make a gift to the working class save at the expense of the normal market rate of (real) wages. Every business man takes into consideration all the expenses of his trade, and bases his prices on those expenses, whether normal or imposed by State or municipality, where he can; and it is only the struggling businesses which cannot in the long run recoup themselves for rates and taxes. In a word, a business man gets interest on his outlay, and his outlay includes artificial State burdens. This fact has been proved *ad nauseam*, and the child-like faith that a Ministry has only to say that the employer must pay a tax to prevent him transferring that tax would seem difficult even for legislators intoxicated with the sense of their omnipotence, when they see, as they must see, that the gross assessments to income-tax have risen faster under a Government which has set itself to tax the rich, than under the Government which conducted the Boer war; while they have at the same time to admit that wages have fallen in purchasing power, and specially—as Mr. Ramsay Macdonald himself has just stated—in the last two years. In a word their efforts have made the "rich richer and the poor poorer."

A very simple test may be applied to the Act—Would it have been passed if the beneficiary had been made directly responsible for the whole 9*d*.? It is safe to say that not only would it have not been passed, it would not have been suggested. But the case is worse, if under the pretence of a partly free benefit, Government has actually put more than the whole burden on people whom they state to be too poor to afford the uncomplicated cost. No one can go from cottage to cottage and hear the constant complaint of raised prices (in which the Act plays a dominant part) without seeing that the Insurance Act has already done that; the day I wrote this, a workman's wife estimated that she was paying "something like 2*s*. for the 9*d*."; that is, no doubt, a great exaggeration, but there is no question that the cost of the 9*d*. will go on rising for some time. For the well-to-do among the working class this diminution in real wages does not matter much; but no one pretends that the Act was necessary for these, who were all well insured before. To the class for whose benefit it was intended, the class which must save any possible extra expense out of food, this means dire distress in times of depressed trade; and, looking at their case, one is driven to believe that the Act is a dreadful mistake. To relieve some it has made all poorer. No administrative benefit can ever compensate for lowered nutrition. Without Mr. Masterman's promises at the Bethnal Green election we knew that sooner or later the benefit for this class will have to be free, and if for one section, necessarily, as in the case of education, for all sections. Friends of the Act who trust that by sheer weight of organisation it must endure are living in a fool's paradise. English people have never yet been forced into a duty, for the performance of which they must directly pay; in this single instance of education of their children (which yet stands on a different footing) they have had to be deluded into the notion that they do not pay. If this Act becomes wholly "free," it has become a poor law, naked and unashamed, and falling with all its cruel, if unappreciated, weight on the very class it is meant to relieve. The alternative is that right English remedy, the voluntary system. If you must advocate compulsion, there is a third way, the honest and the cheapest way, which, like the voluntary system, would have the merit of raising wages—viz., putting the whole cost directly on the beneficiaries. But as no Government dare suggest this, it is out of the range of practical politics.

I am constantly meeting with working men who already suspect that they are bearing, now before two years are past, more than the whole cost; if the conviction becomes general there is no fear that the Act will endure on its present basis; and the solution which will naturally suggest itself is voluntaryism. The dilemma in which the profession finds itself is highly unpleasant. Either we are gaining by the Act, in which case we are parasites on the community, guilty of that worst of national sins, depressing the level of wages; or if we are losing, as many of us are, we are being despoiled by the State which should protect us in all legitimate enterprise, in compensation for our clear conscience. But at least we can do this, and I suggest it as a duty for all men, whether advocates of the Act or haters of it with a hatred that grows from day to day; we can do our utmost to stimulate clear thinking among panel patients, and to induce them to inquire whether they are really getting benefits at the ostensible rate or buying them at a cost that spells disaster to the poorer among their ranks.

I am, Sir, yours faithfully,

B. G. M. BASKETT, M.B. Oxon.

Rayleigh, Essex, April 21st, 1914.

THE PAYMENT OF FEMALE MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—You were good enough to publish a letter under this heading *re* salaries under the Board of Control (Mental Deficiency Act) in your issue of Feb. 28th from Dr. F. M. Dickinson Berry and myself. As a result of that letter Dr. Sophia B. Jackson, who was an accepted candidate for the women's post of medical inspector under the Board of Control, and whose self-sacrificing stand for the principle of equal pay for equal work in the medical profession is well known, on being interviewed by the Board, made her acceptance of the post conditional on either the salary being made equal to that of the medical man doing the same work or the work to be done being definitely restricted. The second candidate also made the same stipulations.

A good deal of correspondence between the first and second candidates, the Board of Control, the British Medical Association, and the Registered Medical Women's Association has taken place, and briefly summarised is as follows. On April 8th

the second candidate wrote in thorough concurrence with Dr. Jackson's actions, stating that she would certainly decline to accept the post were it offered to her. On April 9th Dr. Jackson was informed that the second candidate had had a conversation with one of the Commissioners of the Board of Control, who told her the work was restricted, and that the post would probably be lost to medical women if the stand of equal pay were forced, because the salary had been fixed by the Treasury and was unalterable. At the same time she gave Dr. Jackson to understand that if she (Dr. Jackson) persisted in refusing it, she (the second candidate) would feel justified in accepting it. She also added that she would take no "definite step" till she had communicated with Dr. Jackson. The second candidate eventually accepted the post.

Within the last few days an official letter has been received stating that the Board have come to no decision, as alleged, that the duties of the woman inspector to be appointed under the Board are to be "definitely restricted."

In these circumstances, surely any candidate who had accepted a post, believing certain conditions were attached to it which now she knows are not, should refuse to take it. I pass by the extraordinary fact that a Commissioner should make statements that are proved to be incorrect, on the strength of which we may assume the candidate accepted the post.

Apologising for the length of this letter, which I am sure you will allow to deal with principles vital to our profession,

I am, Sir, yours faithfully,

JANE H. WALKER,
President of the Registered Medical Women's Association.
Harley-street, W., April 28th, 1914.

THE BIOLOGY OF TUMOURS.

To the Editor of THE LANCET.

SIR,—The difficulty of defining the relationship that exists between growth and reproduction (growth beyond the individual) to which Mr. H. C. Ross refers in THE LANCET of April 25th, is very largely due, it appears to me, to his assumption that such a highly specialised structure as a cell is to be taken as the unit of life. It is necessary to go much farther back—to what we believe to have been the simplest and most primitive beings, to the time when life made its first appearance upon the earth. Whatever the relationship that existed between growth and reproduction then, it is the same now. Details may have changed, but not the principle.

In these primitive forms of life reproduction was the direct outcome of continued growth. Bulk increased by the ingestion and assimilation of foreign matter until the size of the organism was no longer suited to its environment and it was forced to divide. The dimensions varied in each case. There was no definite size at which division took place. It depended entirely upon circumstances, but when circumstances continued to be the same for generation after generation it gradually came about that division (reproduction) occurred at more or less regular intervals. Then two classes of organisms arose—one in which the daughter units separated from each other at once and lived apart; the other in which they still maintained their connexion with each other. But the power of division (reproduction) remained the common property of every unit in equal degree. The former class advanced no farther. They are the protozoa still. In the latter, owing to emergencies imposed by the division of labour, the function of reproduction which had been the common property of every unit gradually became restricted to one special group of cells. In these the power was developed more and more highly as time went on, and it diminished proportionately in all the rest. But it did not disappear or die out. With the exception of very highly specialised structures, such as the organs of special sense, the power of reproduction is still present in all tissues and can be called into action at any moment, especially while the cells are young.

Reproduction, therefore, is only a form of growth. External conditions originally determined when the growth of the individual should become growth beyond the individual; and these conditions, acting from immeasurable time, impressing their power upon generation after generation, at length led to reproduction taking place only when a definite stage of growth was reached. Auxetics may stimulate reproduction, but reproduction is the product of hereditary transmission from the time when life began upon the earth.

Mr. Ross asks me to suggest a line of experiment. There are certain clinical facts which seem to me to point with no uncertain finger. The secret of the origin of tumours (including cancer) lies not in trying to find influences or agents that will stimulate growth and reproduction, but in isolating and investigating the action of substances that possess the power of checking development and interfering with functional activity. Development controls growth and reproduction. If development is arrested (as, for example, the development of epithelial cells is arrested under certain conditions by arsenic or soot) the functional activity of the tissues is arrested; the power of growth and reproduction, or so much of it as the cells still retain, is freed from control, and if there is the least provocation, such as may be caused by continued irritation, cells and tissues at once begin to increase and multiply at their own free will. The result is a shapeless, formless mass of cells, resembling more or less closely the parent that gave them birth, never advancing beyond it in development, never doing any useful work, but growing without ceasing, so long as there are supplies of food—in other words, a tumour.

I am, Sir, yours faithfully,

C. MANSELL MOULLIN.
Wimpole-street, W., April 27th, 1914.

WILLIAM HAWES AND THE ROYAL HUMANE SOCIETY.

To the Editor of THE LANCET.

SIR,—Your interesting annotation on this subject in THE LANCET of April 25th rekindles the embers of a controversy which a century and a half ago was waged with characteristic mid-Georgian scurrility on either side. Hawes, as you say, published in 1774 "An Account of the Late Dr. Goldsmith's illness so far as relates to the Exhibition of Dr. James's Powders, &c." This pamphlet, with subsequent corrections and the accretion of an appendix, ran through several editions in the course of the year. Perusal of it leaves one in doubt as to whether Goldsmith died in spite of James's powders or because of them. I would add that a leading argument of the pamphlet is based on Hawes's own statement that he was not a doctor, but an

apothecary, so that I am not sure that he should be entitled "Dr." Hawes. But the claim put forward by Hawes to be the pioneer in establishing the Humane Society was too much for his brother apothecary F. Spilsbury to swallow in silence, and in 1776 he published a venomous tract entitled "Free Thoughts on Quacks and their Medicines," full of personal abuse of Hawes. In this tract Spilsbury asserts that all the directions for establishing such an institution had long since been laid down by Dr. Mead in an essay "Of the Mad Dog"; but what is more to our point, he proceeds to show that Dr. Alexander Johnson was "really the first promoter of the scheme for establishing in this kingdom an institution for the recovery of drowned persons, after the manner of similar institutions, already established in France, Holland, Germany, and other places," which had greatly impressed him during his travels abroad. Of his priority to Hawes, at any rate in the matter of publication, there is no question, for in 1773 Johnson had published in London "A Short Account of a Society at Amsterdam Instituted in the Year 1767 for the Recovery of Drowned Persons, with Observations Showing the Utility and Advantage that would accrue to Great Britain from a similar Institution Extended to Cases of Suffocation by Damps in Mines, Choaking, Strangling, Stifling, and other Accidents, by Alexander Johnson, M.D." Now, if this were all, we might well assume that Hawes was unaware of Johnson's work, and had inadvertently and independently turned the same furrow; but it is not all. In the Annual Register, Vol. XX., 1777, Hawes is to the fore again with a project, which he entitles "Cautions against the Burial of Persons Supposed Dead." After some blood-curdling assurances of the frequency of burial of the living he proceeds: "It was the intention of the writer to publish a work upon this subject, but as his various avocations will not permit him to carry that design into execution, he thought it his duty to throw out the above hints; and if they should be the means of preventing one person from being laid out, or, what is more horrible, buried alive, it will afford the writer a pleasure of the noblest kind, that arising from the consciousness of doing good to his fellow-creatures." Now there is hardly a single idea or illustration in this effusion by Hawes but which is transferred in crude and wholesale fashion from Johnson's publication, and this in spite of the fact that only a year previously Spilsbury had openly accused him of pillaging Johnson's wares. By all means let Hawes wear the halo you have so generously bestowed on him—may we all earn ours as easily!—but let us remember that the light that illumines it is but the reflected light of Dr. Alexander Johnson, doctor of physic.

I am, Sir, yours faithfully,

April 22th, 1914. RAYMOND CRAWFURD, M.D., F.R.C.P.

CASE OF SIMULATED GANGRENE OF THE LUNG.

To the Editor of THE LANCET.

SIR,—Some years ago in distant Vancouver I received an urgent summons to a patient I had occasionally but not recently treated for chronic bronchitis. On entering his room a putrid odour was noticeable, which I found came from a small quantity of expectorated sputum. The patient was pale, with pinched, drawn features, clammy cold surface, and small weak pulse, apparently *in extremis*. So much did he feel that way that he had sent for his lawyer to make an alteration in his will.

I did not doubt but that I had a case of gangrene of the lungs to deal with. As the first indication was obviously to rid the bronchi of the literally putrid sputum, I gave a full dose of vin. ipecac., which was the means of promptly bringing away more stinking sputum. In a few minutes there was a marked improvement in the patient's condition, and in less than 15 minutes he was out of danger. The next forenoon he was as well as usual. The presence of the putrid sputum and its resultant infection of the system was, there can be little doubt, due to the patient taking too freely of a patent sedative cough "cure," which caused the sputum—infected doubtless by some one or more of the flora which Dr. H. Batty Shaw in his lecture published in THE LANCET of April 18th enumerates as the cause of gangrene of the lung—to be retained. I had the patient under observation for some years after this experience and never knew of his expectorating offensive sputum again; the bronchitis somewhat lessened and the health improved. Had the patient died I would unhesitatingly have assigned gangrene of the lungs as the cause of death, and had a necropsy been made the neighbouring lung tissue would infallibly by then have become infected, and hence my diagnosis have been triumphantly confirmed. To my mind this single case shows that offensive expectoration, due to whatever cause, should be treated by frequent emesis.

I am, Sir, yours faithfully,

D. L. BECKINGSALE, M.D. Edin.

Hampden Club, N.W., April 21st, 1914.

EXTRAPERITONEAL URETERO-LITHOTOMY THROUGH A MEDIAN SUPRAPUBIC INCISION.

To the Editor of THE LANCET.

SIR,—I have read with considerable interest in THE LANCET of April 25th the article by Dr. Gordon Whitehead and Mr. John Morley on the method of approach of the lower end of the ureter by means of a median suprapubic incision.

During the last two years I have used in three cases a method which is slightly modified in that a vertical incision is used a little to one side of the mid-line, and I can fully endorse their statements as to its value in cases where a stone is impacted close to the bladder. I had believed that this method was a device of my own, but in the last (the March) number of the *Annals of Surgery* Judd has described three cases in which he used a similar method. In two of his cases, as in all of mine, the operation was deliberately planned as an approach to the ureter itself and the bladder was not opened. In one of Judd's cases, as in that reported by Mr. Morley and Dr. Whitehead, the bladder was opened previous to the laying bare of the ureter. The following is a brief account of the cases in which I made use of this method.

1. A male aged 36 years. Dull aching pain for 14 years in right loin, steadily increasing, and for two years definite attacks of colic. Never any trouble with micturition or hæmaturia. Neither kidney could be felt and nothing abnormal was seen in the radiograph. No abnormality of the urine. On cystoscopy indigo carmine seen to be secreted from left ureter; none from right ureter. Catheter passed readily up left ureter, but stopped abruptly three-quarters of an inch from opening of right ureter. A vertical incision 1 inch to the right of the mid-line was used, the peritoneum stripped off the bladder, and the bladder pulled over to the left. The bifurcation of the

common iliac artery was readily laid bare. After some difficulty the ureter was found; it was the size of a coil of small intestine, and hence was overlooked several times in the search. It was then easily traced to the base of the bladder, the vas being seen as it crossed and hooked on one side. The ureter was opened and a stricture found at its entry into the bladder. The catheter passed upwards, however, for a distance of 20 inches. It was evident that the pelvis was much dilated. The ureter was therefore ligatured and divided close to the bladder, the upper end of the ureter being freed as far as possible in an upward direction. The wound was then closed and the kidney, which was in a condition of extreme hydronephrosis, removed together with the ureter by the ordinary incision in the loin.

2. A male aged 30 years. Six weeks before admission sudden onset of acute pain passing from right groin to loin, followed by hæmaturia and frequency; one similar attack since. A radiograph showed an oval calculus in the position of the lower inch of the right ureter. On attempting to catheterise the right ureter the catheter was stopped 1 inch above the orifice. A 2-inch suprapubic incision was made 1 inch to the right of the mid-line. The ureter was readily found and traced down to the bladder, the stone being felt about half an inch above the bladder wall. The ureter was opened and the stone was easily extracted, a ureteric catheter then passing freely into the bladder. The opening in the ureter was stitched with three catgut sutures and a small tube inserted, the rest of the wound being closed. There was a slight discharge of urine for four days, after which the wound closed entirely, and the patient was discharged cured.

3. A male aged 42. Typical attack of renal colic two weeks before admission to hospital, followed by hæmaturia. The radiograph showed a typical shadow of a renal calculus about 2 inches above the vesical orifice on the left side. A catheter was obstructed at the corresponding point. An incision similar to that used in the last case was made to the left of the mid-line, and the stone easily extracted. There was a slight discharge of urine for nearly a week, after which the wound healed rapidly.

By the use of the lower rectus incision a very good view is obtained of the lower 6 inches of the ureter. Its point of entry into the bladder is laid bare and is rendered so accessible that operations upon it can be readily carried out, and the adjacent portions of the bladder are also exposed. The vas and vesiculæ can be seen, as also the iliac arteries. The peritoneum being unopened no difficulty is experienced from the proximity of the intestines. The operation being wholly extraperitoneal the danger of infection is slight and the wound can be freely drained. The exposure is infinitely preferable to that given by a parasacral or iliac routes.

I am, Sir, yours faithfully,

ALBERT J. WALTON.

Weymouth-street, W., April 25th, 1914.

THE FATALITY OF MEASLES.

To the Editor of THE LANCET.

SIR,—In a leading article in THE LANCET of Feb. 21st on "The Control of Measles" you quote with approval Dr. James Kerr's statement that "the chief hope of combating measles lies in improvements in regard to habits of life, housing, and space to live." No doubt this contains much truth, but it does not quite hit the principal nail on the head.

It is universally admitted that the fatality of measles is almost negligible among the educated and well-to-do classes, but considerable among the poor and ignorant. To a certain extent want of abundant fresh air and of comfortable accommodation is responsible; but the chief cause, I have long been certain, is the scare of a "chill" on the part of the poor and ignorant parents and friends; and in order to escape from this illusory Scylla they run into the real Charybdis of the opposite extreme. Thus the child is packed more or less tightly in a bundle of clothes—usually of flannel or flannelette—covered with a superabundance of impervious bedclothes, and sometimes (as I have seen in London) kept near a large fire, and, of course, in a badly ventilated room. To touch the skin with water would be looked upon as next door to murder, so that the child is not refreshed by washing or changing the clothes.

This process of overheating is, I believe, far more prejudicial and dangerous than any chill that is likely to be sustained while the pyrexial period lasts. It intensifies the disease, and it is the intensity of the disease that mainly determines aggravation of bronchitis or the onset of pneumonia—the chief causes of death. That this fact is recognised and acted upon by most medical men I readily allow, but I do not remember having seen it expressly stated, especially in codes of instruction for popular use.

Small-pox used to be regarded and treated in the same way by popular and medical assent until Sydenham taught the beneficial effects of keeping the patient cool and giving him fresh air.

It is, of course, useless, to expect any advantage from notification of the disease—the nostrum of many health authorities. The important desideratum is that cases of measles shall be attended by sensible medical men. If pneumonia should develop in the course of the disease, the most effectual treatment is blood-letting—not necessarily venesection as was always practised with good effect in old times, but, in the case of children, by the application of one or two leeches, which usually suffice.—I am, Sir, yours faithfully,

F. LUCAS BENHAM, M.D., M.R.C.P.

Exeter, South Australia, March 25th, 1914.

TRAUMATIC DISLOCATION OF THE HIP-JOINT.

To the Editor of THE LANCET.

SIR,—By an odd coincidence I read Mr. Harold Rischbieth's account of the above injury in a boy aged 10, reported in THE LANCET of April 18th, a few hours after seeing a boy who was in the Children's Hospital at Shadwell at the age of 7 for a similar accident. I had written to the boy asking him to come up to report himself.

On referring to my notes I find that the boy was admitted on Oct. 23rd, 1910. He had fallen down in the street on the day of admission and the left femur had been dislocated dorsally. He had suffered from no previous injury to the limb. The femur was markedly flexed, adducted, and rotated inwards, the left knee being in apposition with the lower end of the right thigh just above the right knee. The great trochanter was well above Nélaton's line, and there was a deep pit in Scarpa's triangle. Passive movements caused great pain. The boy was given chloroform and placed on a mattress on the floor. Reduction of the dislocation by flexion, adduction, and external rotation, associated with raising of the limb and sudden extension, was accomplished without great difficulty. A long side-splint was applied for 24 hours, after which sand-bags were substituted. Passive movements were commenced three days after the injury, and the boy was allowed to walk on Nov. 3rd. X rays showed

no injury to bone or epiphysis. The history since the accident has been uneventful.

I am, Sir, yours faithfully,

Harley-street, W., April 24th, 1914. HILDRED B. CARLILL.

THE STATE, THE MOTHER, AND THE CHILD.

To the Editor of THE LANCET.

SIR,—The leading article with this title in THE LANCET of April 25th approves "the efforts which are now being made to extend State action in all that relates to maternity and infant welfare," and says that "individualists, if any such remain," and "the eugenist," may argue against these efforts. Then you remark that "such arguments, however, usually appear to be pleas for inaction." This is very true; for few individualists and eugenists have the courage to advocate the extension of the knowledge of family limitation to the poor, which is the only alternative to State action on their behalf. So we are progressing towards a stage when the married couples with more than 30s. a week will be having an average of only one child per family in order to help to maintain the large families of those with less than 30s. a week! I earnestly hope, however, that there are many colleagues who share my view that if people were encouraged to have no more than one child for every 20s. or so a week poverty would soon cease to exist, the race would quickly improve, and a welcome freedom from meddlesome and costly legislation and officialism would ensue.—I am, Sir, yours faithfully,

BINNIE DUNLOP, M.B., Ch.B.

Alexandra Court, S.W., April 25th, 1914.

THE NATIONAL INSURANCE ACT.

LONDON INSURANCE COMMITTEE AND THE SURPLUS FUNDS.

THE London Insurance Committee by a majority of four votes has decided to draw up a scheme for the distribution among the medical men on the panel of the surplus funds arising in respect of unallotted patients. At a meeting of the Committee held to consider the matter, Mr. Kingsley Wood first moved that having regard to the opinion of Mr. Danckwerts, K.C., whose death is recorded this week, the Committee should inform the Commissioners that it could not proceed with the distribution. Mr. Kingsley Wood argued that there should be either judicial or Parliamentary authority before dealing with the fund, but he pointed out that no action had been instituted by the medical practitioners which would have facilitated the obtaining of a judicial decision. Mrs. Handel Booth moved an amendment to the effect that a scheme for the distribution of the money should be prepared and submitted to the Commissioners, who would have the opinion referred to before them and whose decision would absolve the committee. After discussion this amendment was carried by 27 votes to 23. With regard to the risks suggested in the opinion of Mr. Danckwerts, it may be pointed out that even though a distribution were to take place which in law were wrong, it might still be difficult to find anyone having such an alternative interest in the money as would entitle him to raise any question in the courts with regard to it.

SANATORIUM BENEFIT IN LONDON.

The London Sanatorium Benefit Subcommittee in a report on arrangements for the present year estimates the income to be dealt with at £100,000, and the required expenditure to include £40,000 to medical practitioners for domiciliary treatment, £7620 for drugs, £5000 for dispensary treatment, and £54,600 to cover the cost of 700 beds for institutional treatment. In an explanatory memorandum the Sanatorium Benefit Subcommittee quoted the Chancellor of the Exchequer as having stated that at first the payment of 6*d.* for domiciliary treatment might be very much too high. At present the amount of the payment under this head could not be varied, but the subcommittee noted that before the end of 1915 there would be a reconsideration of the whole position. If it were not for money accumulated during the first six months' working of the Act, when applications for sanatorium benefit were few, there would be a deficit of £10,000 this year in respect of institutional treatment.

LONDON PRACTITIONER VINDICATED.

The Medical Service Subcommittee communicated to the London Insurance Committee on April 23rd the results of its inquiries into a case in which a practitioner on the panel had been censured (in his absence) by a coroner's jury, it being suggested that he did not properly examine a patient. Treatment had been given for dyspepsia and rheumatism; the post-mortem examination showed advanced tuberculous disease. A curious feature of the case appeared to be the reticence of the patient as to his symptoms. He never mentioned that he had night sweats, and definitely denied that he had cough or expectoration; he only mentioned diarrhœa, stomachic pains, and rheumatic pains in the knee. The practitioner had examined the patient a year earlier and had found him to be organically sound. The medical members of the subcommittee advised that there was no evidence to show that the tuberculous disease of the lungs was in any way active at the time of death, or that it was an active agent in causing death. The conclusion arrived at was that the practitioner exercised proper professional care and was not negligent in any way. At the request of the practioner—Dr. D. J. F. Bennett, of Walworth, S.E.—his name was publicly announced.

ARBITRATION UNDER THE INSURANCE ACT.

The Scottish Insurance Commissioners were recently invited for the first time to arbitrate between an insured patient and an Approved Society on the question of the refusal of the latter to pay sickness benefit. The applicant was Mrs. M'Cartney, a member of the Scottish Catholic Society, which had refused her the benefit claimed on the ground that she was not incapacitated. Mrs. M'Cartney, in accordance with the rules of the society, applied to the Commissioners to appoint an arbitrator to decide the question, and Mr. R. D. M'Ewen, chairman of the Glasgow Insurance Committee, being duly appointed by the Commissioners, held an inquiry and found in her favour. The society appealed to the Commissioners against this decision, and the Commissioners have now issued their award upholding that of the arbitrator, and finding that the insured person was incapacitated for the period for which she claimed. The Commissioners further found the society liable for £3 3s. as costs. Congratulations are due to the

medical man on the panel whose certificate has thus been upheld.

THE QUESTION OF CERTIFICATION AT GLASGOW.

A conference was held on April 24th at the City Chambers, Glasgow, between representatives of the medical profession and the managing bodies of the larger medical institutions in the city regarding the question of the certification for sickness benefit of insured persons while under treatment in institutions. The conference was called in consequence of a motion in the following terms adopted by the Glasgow Insurance Committee:—

That a conference be arranged of representatives of the Insurance Committee, the Local Medical Committee, the Panel Committee, and institutions treating insured persons, with a view to securing coördination in the certification of insured persons for sickness benefit while under treatment in institutions.

There were present: Dr. A. Johnston and Dr. J. McKie, representing the Local Medical Committee; Dr. A. T. Campbell, Dr. Miller Semple, and Dr. James R. Drever, representing the Panel Committee; Dr. D. J. Mackintosh (Western Infirmary), Dr. D. O. Macgregor (Victoria Infirmary), Dr. J. Maxtone Thom (Royal Infirmary), Dr. W. J. Richard (Merryflatts Hospital), Dr. John Brownlie (Ruchill Hospital), representing their respective medical institutions; Dr. A. K. Chalmers (medical officer of health of the city); Dr. A. Macgregor, tuberculosis officer; Mr. R. D. McEwan, Mr. John Grieve, Mr. John Maillie, and Dr. J. Grant Andrew, representing the Insurance Committee; and Mr. William Jones, clerk to the committee.

The Chairman having referred briefly to the position of insured persons under treatment in institutions, to the inability of panel practitioners to grant the usual certificates of incapacity during such period, and to the delays which had occurred, particularly in cases where there were dependents, in making payment of sickness benefit through lack of the necessary certificates, a discussion ensued, which was taken part in by, among others, Dr. Mackintosh, Dr. Chalmers, Dr. Brownlie, Dr. McKie, Dr. Richard, Mr. Maillie, and Mr. Grieve. The following forms of certificates were submitted:—

GLASGOW ROYAL INFIRMARY.

This is to certify that ..... is at present under treatment in the Infirmary, and is unable for work.

....., House Surgeon.

WESTERN INFIRMARY, GLASGOW.

This is to certify that ..... is at present an ..... Patient of this Infirmary.

As the result of the views expressed by the several speakers, it was agreed that such institutions as may not be already doing so be recommended to adopt a form of certificate, certifying that the insured person is an inmate of the institution, similar to the forms in use at the Royal and Western Infirmaries, which forms, it was understood, were freely accepted by Approved Societies.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND TREATMENT BY UNQUALIFIED PERSONS.

The following resolution was passed by the Royal College of Surgeons in Ireland on April 19th in relation to the employment of non-qualified persons for the purpose of medical treatment under the National Insurance Act:—

The College observes with regret that in Section 44 (2) of the National Health Insurance (Medical Benefit) Regulations, 1913, and the Memorandum issued in connexion therewith, provision is made whereby insured persons who make their own arrangements for medical benefit under Section 15 (3) of the National Insurance Act may obtain treatment from non-qualified persons.

Hitherto none but duly qualified medical practitioners have been employed, as such, in any public capacity; and the College deplores that, under an Act professing to promote the health of the nation, recognition should be given and provision made for the payment of public money to a class of persons who have not obtained a legal qualification to practise medicine, and concerning whose medical knowledge there exists no sort of guarantee.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—C. Bluett (Sections I and II.), London Hospital; E. S. Dufty (Sections I. and II.), Sheffield; and B. C. Piercy (Sections I. and II.), Leeds.

Medicine.—C. Bluett (Section II.), London Hospital; W. Brown (Section I.), Oxford and King's College Hospital; M. Dos Santos (Section I.), Louvain and London Hospital; H. Dudley (Section I.), University College Hospital; D. M. Hunt (Section I.), London Hospital; W. Smith (Section II.), Durham; and A. K. S. Wyborn (Section I.), Middlesex Hospital.

Forensic Medicine.—W. Brown, Oxford and King's College Hospital; and N. W. Rawlings, Manchester.

Midwifery.—J. C. Gillies, Leeds; and G. Robinson, Manchester.

The Diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: C. Bluett, E. S. Dufty, and J. C. Gillies.

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL: UNIVERSITY OF LONDON.—A course of lectures on the Pathology of the Heart will be begun by Dr. Thomas Lewis on Wednesday, May 6th, at 11 A.M. The lectures, which are free to all medical men, will include discussion on the following subjects: recent anatomical discoveries; principles of electrocardiography; causes of cardiac syncope and unexpected death; rapid action of the heart; auricular fibrillation and its relation to mitral stenosis; the diagnosis of fibrosis of the heart; alternation of the ventricles; heart sounds and murmurs; dyspnœa in cardiac patients; and hypertrophy with special reference to physical signs. One lecture will be delivered each week.

MARGATE CHAMBER OF COMMERCE. — The seventh annual banquet of the Margate Chamber of Commerce was held in the Queen's Hall, Queen's Highcliffe Hotel, Margate, on April 24th. The occasion possessed particular interest in view of the organised effort now taking place to establish an extension of the holiday season and also of the memorial signed by 250 members of the House of Commons urging the Government to grant facilities for the passage of the Health Resorts and Watering Places Bill. Amongst other things, this Bill seeks to give powers to seaside and health resort municipalities to invest money out of the rates for the purpose of increasing and making known the attractions of the place. As was pointed out by Mr. Norman Craig, K.C., M.P., in his speech at the banquet, the Chamber of Commerce at Margate has worked very hard to make known to the world the advantages of Margate. This, however, has been a purely voluntary movement, but it is an illogical thing that while Margate is able to speculate £30,000 in a pavilion, it cannot spend a penny of the ratepayers' money in advertising. The corporation may, in fact, speculate, but they must not invest. Mr. Craig said that it was hoped that a reform in this direction would be gained by the passing of the Health Resorts and Watering Places Bill. The Hon. Harry Lawson, M.P., who was the principal guest of the evening, has taken a considerable practical interest in the suggestions in regard to extending the holiday season, and there is every prospect of the matter receiving careful consideration not only by the governing authorities of our seaside and health resorts, but by the great railway companies also. The Margate Chamber of Commerce is continuing its good work, and the excellent propaganda which its members have actively put forward during its existence since 1899 in the interests of the

health-seeking public and of the town has developed very encouraging results which should induce other watering places to found a similar organisation. Margate possesses a splendid asset in its wonderfully recuperative air.

EDINBURGH UNIVERSITY CLUB OF LONDON.—The jubilee dinner of this club will be held on Wednesday, May 13th, in the Grand Hall of the Hotel Cecil, at 7.30 P.M. Lord Balfour of Burleigh will preside.

SOUTH LONDON HOSPITAL FOR WOMEN.—The annual general meeting of supporters of this hospital will be held at 35, Wimpole-street, W., on Wednesday, May 6th, at 3.30 P.M., when the chair will be taken by the Viscountess Castlereagh.

TUBERCULIN DISPENSARY LEAGUE.—On Saturday, May 9th, at 12 o'clock noon, H.R.H. Princess Christian of Schleswig-Holstein will declare open the new dispensary at 1, Manor-street, Chelsea, S.W. The dispensary will be open for inspection from 2 till 6 o'clock.

THE PORT OF EXETER AND SMALL-POX.—At the last meeting of the Exeter port sanitary authority it was decided to support the Association of the Port Sanitary Authorities in their action of urging the Local Government Board to grant powers to port authorities to detain all vessels which have cases of small-pox on board. Such power is already granted for cases of cholera, yellow fever, or plague.

THE MEDICAL DIFFICULTY AT DROITWICH.—The Droitwich board of guardians at their last meeting decided, after considerable discussion, to submit their difficulty in obtaining a medical officer to the Local Government Board. The guardians originally offered the post at £90 per annum. As there were no applications they increased the offer to £100, but this also proved unacceptable to the medical men of Droitwich. Meanwhile the acting medical officer has been asked to continue his duties until June 21st.

CONFERENCE ON MORALS.—The International Federation for the Abolition of the State Regulation of Vice, which met last year in Paris, will hold its annual conference for 1914 in Portsmouth from June 15th to 18th, when representatives are expected to attend from France, Denmark, Italy, and other foreign countries, in addition to members of the British branch. The problem to be considered will be "A Constructive Policy" in relation to the reduction of venereal disease and of public immorality. At a meeting of representatives of public bodies interested in social questions held at the town-hall, Portsmouth, on April 24th, an executive committee to make arrangements for the conference was appointed. It was resolved to ask permission of the international committee to give an opportunity to discuss the subject from its economic and educational aspects, which were not included in the agenda of the conference.

METROPOLITAN PUBLIC GARDENS ASSOCIATION.—London owes a debt of gratitude to this association for the preservation of many acres of open land which otherwise would have been occupied by buildings. During the past year the association has been responsible for much good work, among which may be mentioned its coöperation in securing for public use the central enclosure of St. Peter's-square, Hammersmith, in the projects for the purchase of farm land adjoining Wandsworth Common, in the extension of Valentine's Park, Ilford, and in the acquisition of Colley Hill, Reigate. The laying out of gardens in the large churchyard of St. Paul, Deptford, was also undertaken by the association; and its activities on behalf of the Wimbledon Common and Putney Heath Extension Scheme and the Wandle River open spaces have been attended with good results. These and other works have, however, entailed an expenditure greater than the actual income, which amounted to £2058, a deficit remaining on the year's working of £518. The association was formed in 1882 to supply one of the most pressing needs of the poorer districts of London by providing resting-places for the old and playgrounds for the young in the midst of densely populated districts, and no one can read the detailed work of the association in the annual report for 1913, which is published at 83, Lancaster Gate, price 6*d*., without realising the importance of the work and the need for its extension. A map of London on the scale of 1½ inches to the mile contained in the report is especially worthy of study.

ROYAL SOCIETY OF ARTS.—At the ordinary meeting at John-street, Adelphi, London, W.C., on Wednesday, May 6th, at 8 P.M., the paper on Inexpensive Motoring, by Mr. A. Ludlow Clayden, should prove of interest to many medical practitioners.

POST-GRADUATE COLLEGE, WEST LONDON HOSPITAL.—A conversazione will be held at the West London Hospital, Hammersmith, by the staff of the college on Wednesday, May 20th, at 8.30 P.M. Exhibitions and music will form part of the entertainment, and refreshments and smoking will be provided.—The summer session of the college will commence on Monday, May 11th.

THE LORD MAYOR TRELOAR'S CRIPPLES' HOSPITAL AND COLLEGE.—The first festival dinner of this useful institution, which is situated at Alton, Hants, will be held on Wednesday, May 13th, in the Merchant Taylors' Hall, Threadneedle-street, City. The chair will be taken by the Right Hon. Arthur J. Balfour, M.P., at 7.30 P.M.

EXHIBITION OF THE ARTS AND INDUSTRIES OF THE BLIND.—This exhibition will be held in connexion with the International Conference on the Blind at the Church House, Great Smith-street, Westminster, London, from June 18th to 24th, both dates inclusive. It will be open from 10 to 1, 2.30 to 7, and from 8 to 10 each day, Sunday excepted. There will be a charge for admission, but entrance will be free to members of the Conference on showing their cards of invitation. The exhibits will include (*a*) goods made by the blind; (*b*) machines, apparatus, books, &c., which may be used by the blind; and (*c*) objects, books, pictures, &c., illustrating the history, education, and training of the blind or connected with blindness or with notable blind men and women. A catalogue will be printed, and the forms of particulars of exhibits must be returned to Mr. Stuart Johnson, care of Miss J. B. Weippert, 110, Loughborough-park, S.W., by May 18th, but blind persons should send their exhibits to the societies for the blind with which they may be connected or else to the local secretaries not later than May 8th, who in their turn will send all exhibits to the Church House not later than June 8th. No charge will be made for space except to firms exhibiting goods under Class B. All correspondence connected with the exhibition should be addressed to Mr. Stuart Johnson, 64, Denison House, 296, Vauxhall Bridge-road, London, S.W., and marked outside "Exhibition." Persons possessing or knowing of objects likely to form interesting exhibits or desiring to assist in the work of the exhibition are requested to write at once.

INTERNATIONAL SOCIETY FOR SEXUAL RESEARCH.—This society is organising its first congress, to be held in Berlin this year from Oct. 31st to Nov. 2nd. The congress will cover the entire field of scientific sexual research, and will probably be divided into a biological-medical, a sociological, a legal (including criminal anthropology and psychology), and a philosophic-psychological-pedagogical section. The proceedings will be conducted in German, English, and French, the president being further empowered in special cases to permit the use of other languages. The following addresses are announced:—Professor Dr. Broman, Lund, "Causes and Spread of Natural Sterility and its Share in the Decreasing Birth-rate"; Professor Dr. Hans Gross, Graz, "Comparative Criminal Psychology of the Sexes"; Professor Dr. Ch. Klumker, Frankfurt a.M., and Pastor Wilhelm Pfeiffer, "What is to Become of the World's Illegitimate Children?"; Professor Dr. Mingazzini, Rome, "Female Criminality and Menses"; Professor Dr. W. Mittermaier, Giessen, "The Attitude of Criminal Law to Sexual Crimes in the Course of History"; Dr. Albert Moll, "On the Psychology, Biology, and Sociological Place of the Old Maid"; Professor Dr. Sellheim, "Propagation and Readiness to Propagate as the Task of Woman"; Professor Dr. E. Steinach, Wien, "Receptivity to Influence of the Sexual Characteristics"; Professor Dr. S. Steinmetz, Amsterdam, "The Individual Factor in Race-Blending"; Geh. Reg. Rat Professor Dr. Julius Wolf, Berlin, "Sexual Science as a Science of Education and Civilisation." Participation in the congress is free to members of the society. Non-members are expected to pay a registration

fee of 10 marks. All inquiries respecting the congress and the society should be directed to Dr. Max Marcuse, Berlin W.35, Lützowstr. 85.

RURAL MIDWIVES ASSOCIATION.—The eleventh annual meeting of this association will be held at 3, Grosvenor-place, London, S.W., on Tuesday, May 5th, at 3.15 P.M., under the presidency of the Marchioness of Tullibardine. Miss Margaret Awdry will speak on Infant Mortality, and Mr. Francis E. Fremantle on Coöperation of Voluntary Associations with Public Bodies in Rural Areas.

MEDICAL RESEARCH IN CHINA.—With the object of ascertaining the mode of spread of trematode diseases of man and the relations of such human diseases to those in domestic animals, a party consisting of Dr. R. T. Leiper, of the London School of Medicine, Surgeon E. L. Atkinson, R.N., and Mr. Cherry-Gerrard has recently arrived in Shanghai. They will first ascend the Yangtze river and spend several months in the interior of China. The London School of Tropical Medicine is responsible for the despatch of the party.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Milk Legislation.

Mr. HERBERT SAMUEL'S promise to expedite the introduction of a Milk Bill has been well received by those Members who have been pressing for legislation on this matter for years. Indeed, the object of Mr. ASTOR'S motion on Wednesday, April 22nd, was primarily directed to impress on the Government the necessity for a Bill on the subject. Mr. BURNS when he was at the Local Government Board desired to deal with the milk problem, and although he introduced a measure it was not found possible to press it in the face of the opposition of the dairy interest to some of its provisions. Mr. SAMUEL'S Bill will be more restricted than the one produced by Mr. BURNS.

HOUSE OF LORDS.

THURSDAY, APRIL 23RD.

Midwives (Scotland) Bill.

Lord BALFOUR of BURLEIGH, in moving the second reading of the Midwives (Scotland) Bill, said that the communications which had been received with reference to the Bill since it was introduced were entirely favourable, but a number of drafting amendments had been suggested.

The second reading was agreed to without debate.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 22ND.

Mortality Amongst Seamen.

Mr. MCGHEE asked the President of the Board of Trade whether his attention had been called to the statistics relating to mortality amongst seamen on British ships; and whether he proposed to take any steps in the matter.—Mr. BURNS answered: I am aware of the statistics to which my honourable friend refers, and by my direction the whole question of seamen's mortality is now being investigated by officers of my department in consultation with representatives of the Local Government Board and the General Register Office.

THURSDAY, APRIL 23RD.

Form of Declaring-on Certificate.

Mr. CHARLES BATHURST asked the honourable Member for St. George's-in-the-East, as representing the Insurance Commissioners, whether he was aware of the feeling among Approved Societies and their various organisations that the form of declaring-on certificate, Medical 34, issued by the Insurance Commissioners to panel doctors, should bear upon it words to the effect that the certificate should be sent in to the society immediately it was signed; and whether he would take steps to have the desired alteration carried into effect.—Mr. WEDGWOOD BENN replied: The question of the revision of the form in the manner referred to by the honourable Member is now under the consideration of the Insurance Commissioners.

Mr. BATHURST: How long will it be before this consideration leads to action?—Mr. WEDGWOOD BENN: The honourable gentleman has just made a suggestion which will be acted on if it is a good one.

Mr. BATHURST: Was it brought to the knowledge of the Commissioners many months ago?—Mr. WEDGWOOD BENN: Not to my knowledge.

Stoke-on-Trent Panel.

Sir HENRY CRAIK asked the honourable Member for St. George's-in-the-East whether his attention had been called to the delay which had occurred in paying the doctors on the Stoke-on-Trent panel, and whether the Insurance Commissioners could bring to an end a state of matters which inflicted heavy loss upon the doctors who had undertaken to serve under the Act.—Mr. WEDGWOOD BENN answered: My right honourable friend is not aware that any avoidable delay has arisen in the case referred to. He is informed that the doctors in question have already been paid 94 per cent. of the amount estimated to be available for their remuneration, and as a matter of fact the accounts, with a view to a settlement, are in the hands of the doctors themselves for agreement by them.

MONDAY, APRIL 27TH.

Hop Substitutes in Brewing.

Mr. DUNDAS WHITE asked the President of the Board of Agriculture whether he would state what hop substitutes were used in the brewing or preparation of beer which were deleterious to health and were not already prohibited by the Sale of Food and Drugs Acts or other statutes.—Mr. HERBERT LEWIS (on behalf of Mr. RUNCIMAN) replied: The proposed legislation is not based on the assumption that hop substitutes are deleterious to health, and I am not prepared to say whether or not any hop substitutes can be so described.

Medical Cards.

Mr. DENNISS asked the honourable Member for St. George's-in-the-East what was the number for England, Wales, and Scotland respectively of insured persons' medical cards which had not been delivered by the Post Office to the addressee; where those cards were at present; what steps were being taken, or were proposed to be taken, to find the addressees and deliver the cards; and whether the Approved Societies had been invited to furnish the addresses of those of their members whose medical cards had been returned through the post; and, if so, with what result.—Mr. WEDGWOOD BENN answered: The numbers of medical cards returned through the Post Office are approximately 300,000, 125,000, and 20,000. These cards are with the Insurance Committees by whom they were issued; and steps are being taken in many cases to trace addressees by means of the sources of information accessible, including Approved Societies. Apart from any such steps cards had been issued upon application to a very large number of insured persons who did not receive a card upon the initial distribution.

TUESDAY, APRIL 28TH.

Notification of Infectious Diseases.

Mr. WING asked the President of the Local Government Board whether he would amend the Notification of Infectious Diseases Act, by order or otherwise, in such a manner as to make it compulsory on the part of private medical attendants to inform parents as to the nature of the illness of their children and its infectious character, and advise as to the exclusion of children from school pending the arrival of the medical officer of health; and whether he was aware that this proposal was recommended by several public officers of health.—Mr. HERBERT SAMUEL replied: I am aware that a suggestion of this kind has been made in the report of a medical officer of health, but I have received no representations on the subject. Legislation would be required to give effect to the suggestion, and I am not at present convinced of the necessity for adopting compulsion in this matter.

WEDNESDAY, APRIL 29TH.

Unallocated Panel Surplus in London.

Sir J. D. REES asked the honourable Member for St. George's-in-the-East whether the Government had sanctioned the distribution proposed by the London Insurance Committee of the unallocated surplus of about £200,000 in the panel fund to the doctors on the panel; and whether legal advice had been taken by the Insurance Commissioners as to the legality of such distribution.—Mr. WEDGWOOD BENN replied: The proposals of the London Insurance Committee as to the manner in which the sum at issue (the amount of which is overstated in the question) is to be distributed among the doctors have not as yet been submitted to the Insurance Commissioners.

BOOKS, ETC., RECEIVED.

THOMAS Y. CROWELL COMPANY, New York.

Tuberculosis: its Cause, Cure, and Prevention. (A book for laymen.) By Edward O. Otis, M.D. Price $1.25 net.

F. A. DAVIS COMPANY, Philadelphia. STANLEY PHILLIPS, 22, Creighton-road, Queen's Park, London.

Modern Ophthalmology: A Practical Treatise on the Anatomy, Physiology, and Diseases of the Eye. By James Moores Ball, M.D., LL.D., Dean and Professor of Ophthalmology in the American Medical College of St. Louis. Third edition, revised and enlarged.

LAURIE, T. WERNER, London.

A Daughter of Debate. By Mrs. Ambrose Harding. Price 6s.

Woman and Crime. By Hargrave L. Adam. Price 6s. net.

LEWIS, H. K., London.

Diseases of the Nervous System for the General Practitioner and Student. By Alfred Gordon, A.M., M.D. Paris. Second edition, revised and enlarged. Price 17s. net.

LIBRAIRIE MÉDICALE ET SCIENTIFIQUE, Rue Serpente, Paris.

Les Teintures Capillaires à la P. Phénylène Diamine: de leur Interdiction aux Idiosyncrasiques. Par S. Rousseau, Pharmacien de 1re classe, Docteur de l'Université de Paris. Price Fr.3.

LONGMANS, GREEN, AND Co., London, New York, Bombay, and Calcutta.

The Viscosity of Liquids. By Albert Ernest Dunstan, D.Sc. Lond., and Ferdinand Bernard Thole, B.Sc. Lond. With diagrams. Price 3s. net.

MALOINE, A., Paris.

Les Opsonines et les Bactériotropines au point de vue des Expériences personnelles et La Critique de la Théorie de Wright. Par le Dr. St. Serkowski (Pologne). Price Fr.2.50.

L'Arthritisme-Diathèse à Vichy Physiologie pathologique et Thérapeutique physiologique. Par E. Gautrelet (Docteur in Pharmacie), et H. de Lalaubie (Docteur in Médecine). Price Fr.10.

MARHOLD, CARL, Halle a.S.

Heil-Und Pflegeanstalten für Psychischkranke. Redigiert Oberarzt Dr. Johs. Bresler. (Lübeu i Schles.) Band I. Price M.14.

MARLBOROUGH, E., AND COMPANY, London.

German Technical Words and Phrases: An English-German and German-English Dictionary of Technical and Business Terms and Phrases. By C. A. Thimm and W. von Knoblauch. Second edition, revised and enlarged. Price 2s. 6d.

METHUEN AND Co., London.

A Third-Year Course of Organic Chemistry: Heterocyclic Compounds, Carbohydrates, and Terpenes. By T. P. Hilditch, D.Sc. Lond., F.I.C. Price 6s.

Some Minute Animal Parasites or Unseen Foes in the Animal World. By H. B. Fantham, D.Sc. Lond., B.A. Cantab., A.R.C.S., F.Z.S., Lecturer in Parasitology in the Liverpool School of Tropical Medicine; and Annie Porter, D.Sc. Lond., F.L.S., Beit Memorial Research Fellow, Quick Laboratory, Cambridge. With frontispiece and 56 text figures. Price 5s. net.

MURBY, THOMAS, AND Co., London.

The Mind at Work: A Handbook of Applied Psychology. Edited by Geoffrey Rhodes, with contributions by Charles Buttar, M.D., E. J. Foley, and Professor L. L. Bernard, Ph.D. Price 3s. 6d. net.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ARNOTT, ORROCK, M.B., B.S. Durh., has been appointed Superintendent in Charge of the Basutoland Leper Settlement, Botsabelo, Basutoland.

BAXTER, A., M.B., C.M. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Old Meldrum District of the county of Aberdeen.

COURTS, A. S. C., M.D. Lond., has been appointed Resident Medical Officer at the Hampstead General and North-West London Hospital.

DEARNLEY, GERTRUDE, M.B., B.S. Lond., has been appointed Assistant Anæsthetist and Junior Clinical Assistant to the Royal Free Hospital.

DORE, S. E., M.D. Camb., M.R.C.P. Lond., has been appointed Consulting Physician for Diseases of the Skin to the Evelina Hospital for Sick Children.

FORRESTER-BROWN, MAUD F., M.B., B.S. Lond., has been appointed House Physician at the Royal Free Hospital.

GRAY, NORMAN, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at the Royal Free Hospital.

HALLOWES, K. R. C., M.B., B.Ch. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Cavan District of the county of Cavan.

HEY, W. H., M.B., Ch.B. Vict., F.R.C.S. Eng., has been appointed to the Staff of the Manchester Royal Infirmary.

KRAMER, A. B. H., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the King's Cliffe District of the county of Northampton.

LEA, CHARLES EDGAR, M.D., Ch.B. Vict., M.R.C.P. Lond., has been appointed Honorary Physician to the Ancoats Hospital, Manchester.

MELLAND, C. H., M.D. Lond., M.R.C.P. Lond., has been appointed to the Staff of the Manchester Royal Infirmary.

MILNE, DOROTHY KATE, M.B., B.Ch. Dub., has been appointed Junior Clinical Assistant to the Royal Free Hospital.

MOSS, EDITH M., M.B., B.S. Lond., has been appointed House Surgeon at the Royal Free Hospital.

PLATT, HARRY, M.S., M.B. Lond., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Ancoats Hospital, Manchester.

POWELL, E. M., M.R.C.S., L.R.C.P., has been appointed Junior Obstetric Assistant to the Royal Free Hospital.

ROWNTREE, CECIL W., M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Surgeon to the Cancer Hospital, Fulham-road.

SHUTTLEWORTH, G. E., M.D. Heidel., M.R.C.S., has been appointed by the Board of Control to sign Certificates of Mental Defect under the Mental Deficiency Act, 1913 (Sections 3 and 5).

SMITH, J. R., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Pontyberem District of the county of Carmarthen.

TRUTER, J. Z., M.B., Ch.B. Edin., has been appointed House Surgeon at the Hampstead General and North-West London Hospital.

WALKER, G., M.B., B.C. Cantab., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Colnbrook District of the county of Buckingham.

WEBB, MILLICENT VERE, L.R.C.P. & S. Edin., has been appointed Medical Superintendent of the Dufferin Hospital, Calcutta.

WILLIAMS, H. AUSTIN, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at the Hampstead General and North-West London Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL AND DISPENSARY.—Second House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and laundry.

BARROW-IN-FURNESS. NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £120 per annum, with residence, board, and laundry.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and laundry.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BIRMINGHAM AND MIDLAND HOMŒPATHIC HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, laundry, &c.

BIRMINGHAM CITY HOSPITAL, Lodge-road.—Assistant Resident Medical Officer. Salary £160 per annum, with board, residence, &c.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £5 5s. per week, with apartments.

BIRMINGHAM UNION.—DUDLEY-ROAD INFIRMARY: Resident Assistant Medical Officer. Salary £150 per annum, with apartments, rations, laundry, and attendance.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £120 per annum, with board, residence, and laundry.

BRADFORD CITY EDUCATION COMMITTEE.—Female Physical Exercises Instructor.

BRADFORD POOR-LAW UNION HOSPITAL AND UNION HOUSE.—Female Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with rations, apartments, and washing.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS, Isleworth, W.—Second Assistant Medical Superintendent, unmarried. Salary £150 per annum.

BRIGHTON COUNTY BOROUGH ASYLUM, Haywards Heath.—Locum Tenens Assistant Medical Officer. Salary £4 4s. a week and railway fare.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Honorary Medical Clinical Assistant and Honorary Surgical Clinical Assistant.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, and attendance.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £100 per annum, with board, rooms, attendance, and laundry.

BRISTOL ROYAL INFIRMARY.—House Surgeon for Throat, Nose, and Ear Department. Salary at rate of £100 per annum, with board, lodging, and laundry.

BURY INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with board, residence, and washing.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and laundry.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £200 per annum, with apartments.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.—Resident House Surgeon. Salary £50 per annum, with board and laundry.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £90 per annum, with board, apartments, and laundry.

CHICHESTER, WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary £200 to £250 per annum, with apartments, board, laundry, and attendance.

COUNTY OF LONDON.—London County Council Lecturers in First Aid, Home Nursing, and Infant Care. Salary £1 1s. a lecture.

DERBYSHIRE EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum, with £100 per annum for travelling expenses.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £50 for first six months, £75 for second six months, and at rate of £150 per annum during second year. Also Assistant House Surgeon, unmarried. Salary at rate of £75 per annum, with board and laundry.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £100 per annum, with residence, board, and washing.

DURHAM COUNTY COUNCIL.—Two School Medical Inspectors. Salary £300 per annum.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, laundry, &c. Also Medical Officer to Casualty Department for six months. Salary at rate of £100 per annum, with luncheon and tea provided.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon. Salary £70 per annum, with board, washing, and lodging.

FAREHAM, HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, and attendance.

FEDERATED MALAY STATES GOVERNMENT CENTRAL LUNATIC ASYLUM.—Assistant Superintendent. Salary £400 per annum, with free quarters.

FLINTSHIRE EDUCATION COMMITTEE.—Assistant Medical Officer. Salary £250 per annum.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £30 per annum, with board, residence, and washing.

HALIFAX ROYAL INFIRMARY.—Second House Surgeon and Third House Surgeon, unmarried. Salary £100 and £80 per annum respectively, with residence, board, and washing.

HEMEL HEMPSTEAD WEST HERTS HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with rooms, board, and washing.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, residence, and washing.

KENT COUNTY COUNCIL.—Locum Tenens Tuberculosis Officer for four months. Salary at rate of £500 per annum.

KING'S LYNN, WEST NORFOLK AND KING'S LYNN HOSPITAL.—House Surgeon. Salary £120 per annum.

LEEDS PUBLIC DISPENSARY, North-street.—Junior Resident Medical Officer. Salary £130 per annum, with board, residence, and laundry.

LIVERPOOL CITY INFECTIOUS DISEASES HOSPITAL AND SANATORIUM FOR TUBERCULOSIS.—Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with board, washing, and lodging.

LONDON MEDICAL MISSION, Endell-street, W.C.—Resident Medical Man, unmarried. Salary £120, with board and residence.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, attendance, washing, &c.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board and washing.

MIDDLESBOROUGH, NORTH ORMESBY HOSPITAL.—Assistant House Surgeon. Salary at rate of £100 per annum first six months and £110 per annum afterwards, with board, apartments, washing, and attendance.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

NEW ZEALAND, UNIVERSITY OF OTAGO.—Professor of Anatomy. Salary £900 per annum.

PEMBROKESHIRE EDUCATION AUTHORITY.—Assistant School Medical Officer. Salary £300 per annum.

PETERBOROUGH INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary at rate of £120 per annum, with residence, board, and laundry.

PORTSMOUTH CORPORATION MENTAL HOSPITAL.—Assistant Medical Officer, unmarried. Salary £225 per annum, with board, apartments, attendance, and washing.

PRESTON, COUNTY ASYLUM, Whittingham, Lancs.—Junior Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, &c.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Senior House Physician and Senior House Surgeon. Salary £75 per annum each. Also Junior House Physician and Junior House Surgeon. Salary £60 per annum each. With residence, board, and laundry. All for six months. Also Pathologist. Salary 120 guineas per annum. Also Honorary Medical Registrar.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary at rate of £30 per annum, with lodging, board, and washing.

ROCHDALE INFIRMARY.—Senior House Surgeon, unmarried. Salary £110 per annum, with board, residence, and laundry.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—House Physician for six months. Board, lodging, and washing provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Director of the Pathological Department. Salary £400 per annum. Also Medical Registrar. Salary 100 guineas per annum.

ROYAL INSTITUTE OF PUBLIC HEALTH, Russell-square, W.C.—Assistant Director of the Bacteriological Laboratories. Salary £250 per annum.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Honorary Physician.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Honorary Physicians.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House Surgeon for six months. Salary at rate of £50 per annum, with board, residence, and laundry.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ST. MARY'S HOSPITAL, Paddington, W.—Casualty House Surgeon for six months. Salary £100 per annum, with board and lodging.

ST. PANCRAS SOUTH INFIRMARY AND WORKHOUSE, Pancras-road.—Senior Assistant Medical Superintendent and Senior Assistant Medical Officer. Salary at rate of £175 per annum, with residential allowances.

SALFORD ROYAL HOSPITAL.—Junior House Surgeon and Casualty House Surgeon. Salary at rate of £80 per annum each, with board and residence.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, lodging, and washing.

SHEFFIELD, EAST END BRANCH OF THE CHILDREN'S HOSPITAL.—House Surgeon for Out-patient Department. Salary £100 per annum, with board and residence.

SHEFFIELD, JESSOP HOSPITAL FOR WOMEN.—Assistant House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House Surgeon for six months. Salary £80 per annum, with board and residence.

SHEFFIELD, SOUTH YORKSHIRE ASYLUM, Wadsley.—Locum Tenens Assistant Medical Officer for five months. Salary £5 5s. per week, with apartments, board, and attendance.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon. Salary at rate of £100 per annum, with rooms, board, and washing.

STOCKPORT, COUNTY BOROUGH OF.—Tuberculosis Officer. Salary £400 per annum.

STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—House Physician, unmarried. Also Casualty and Out-patient Officer, unmarried, for six months. Salary at rate of £110 per annum each, with board, residence, and washing.

SUNDERLAND BOROUGH ASYLUM, Ryhope.—Assistant Medical Officer. Salary £200 per annum.

SWANSEA EDUCATION COMMITTEE.—Dental Surgeon. Salary £220 per annum.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, &c.

WALSALL AND DISTRICT HOSPITAL.—Senior House Surgeon and Assistant House Surgeon. Salary £150 and £110 per annum respectively, with board, residence, and laundry.

WEST HAM AND EASTERN GENERAL HOSPITAL.—Junior House Physician and Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith, W.—Ophthalmic Surgeon.

WEST RIDING OF YORKSHIRE.—Dispensary Tuberculosis Officer. Salary £400 per annum.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £100 per annum, with board, apartments, and washing.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Also Two House Surgeons for six months. Salary in each case at rate of £125 per annum, with board, rooms, and laundry.

WOOLWICH TUBERCULOSIS DISPENSARY, Maxey-road, Plumstead, S.E.—Medical Officer. Salary £500 per annum.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Brixham, in the county of Devon, and at Langport, in the county of Somerset.

THE Home Secretary gives notice of a vacancy for a Medical Referee under the Workmen's Compensation Act, 1906, for the Carlisle, Haltwistle and Alston Brampton, Penrith, Wigton, Appleby, and Keswick County Courts, in Circuit No. 3. Applications should be addressed to the Private Secretary, Home Office, Whitehall, S.W., not later than May 12th, 1914.

Births, Marriages, and Deaths.

BIRTHS.

CONRAN.—On April 25th, at Bathurst Lodge, Lavington-road, Ealing West, to Dr. and Mrs. Charles E. Conran, a daughter.

CUMMINS.—On April 24th, at Cullompton, Ashtead, Surrey, the wife of Major S. Lyle Cummins, R.A.M.C., of a daughter.

FOSTER.—On April 21st, at Widey Grange, Crownhill, S. Devon, the wife of Captain R. L. V. Foster, M.B., Royal Army Medical Corps, of a daughter.

GASKELL.—On April 28th, at Ladbroke-grove, W., the wife of John Foster Gaskell, M.D., of a daughter.

HOFFMEISTER.—On April 23rd, at Sion-hill, Ramsgate, the wife of Cyril J. R. Hoffmeister, B.A. Cantab., M.R.C.S., L.R.C.P., of a daughter.

MACRAE.—At Roberts Victor Diamond Mine, Roberts Victor, O.F.S., S. Africa, on April 23rd, the wife of Duncan MacKenzie MacRae, M.A., M.B., Ch.B., of a daughter.

MONTGOMERY.—On April 27th, at Messina, Northern Transvaal, the wife of Dr. W. H. Montgomery (née Dr. Winifred Muirhead) of a daughter (by cable).

TATE.—On April 25th, at Lower Baggot-street, Dublin, the wife of Captain R. Tate, R.A.M.C., of a son.

MARRIAGES.

COULTER—POPE.—On April 22nd, at St. Michael and All Angels, Bedford Park, W., Robert James Coulter, M.A., M.B., of Newport, Mon., to Mary Catherine, second daughter of the late H. Campbell Pope, M.D., and Mrs. Campbell Pope, of Emlyn-villas, Stamford Brook, W.

GARTON—BRYCE-WILLIAMS.—On April 18th, Wilfrid Garton, M.R.C.S., L.R.C.P., to Eleanor de Burgh Bryce-Williams.

PRINGLE—COOPER.—On April 23rd, at Lacca Church, Kennoth Douglas Pringle, M.B., to Dorothy Despard Cooper, eldest daughter of Mrs. Cooper, of Lacca Manor, near Mountrath, Queen's County, Ireland.

DEATHS.

BARRIE.—On April 25th, suddenly, at his residence, Cliff Lodge, Eldon-street, Greenock, Andrew David Barrie, M.B., C.M., in his 71st year.

CÆSAR.—On April 20th, at The Oaks, Pevensey, Sussex, Arthur Augustus Cæsar, late Senior Surgeon, East London Hospital for Children, aged 74 years.

LYON.—On April 27th, suddenly, at Ingatestone Hall, Essex, George Lyon, M.D., M.R.C.P. Edin.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE PSYCHOLOGY OF EXPLETIVES.

IN THE LANCET of Oct. 4th, 1913, p. 1037, we published a note with a few remarks on the psychology of "damn," referring to the frequent use of this word on the stage. Another expletive has now been the subject of recent discussion for a similar reason. It may be that it is really the modern corruption of "Byrlady" "By our Lady," as "Marry" is of "By Mary," or it may have some closer connexion with "Sblood"—"God's blood." Most of these old oaths had some reference to God or some divinity or divine subject. For instance, there were "Sdeath" for "God's death," "Zounds" for "God's wounds," "Od's-bodikins" or "Od's-bobs" for "God's body," and "Od's-pitikins" for "God's pity." "Drat," or "Drot," is derived from "God rot." "Gadzooks" or "zooks" is said to mean "God's hooks," the nails of the Cross. "By gosh," "By Jove," and "Begorra" are well known. "The Deuce" for the Devil or "Deus" or "Zeus" is common. "By Jingo" is said by some to be the Basque "Jinkoa"—"God," and by others to be connected with St. Gengulphus. An odd expletive, used in the eastern counties of England some years back and now obsolete, was "By Jimineezer." This is no doubt "Jimenez" and its abbreviated form "By Jiminy," may yet be heard, but it is one of the expletives which have always been more current in the books purporting to portray the life of the people than in their actual life. The French "Dame," for expressing hesitation or surprise, "Parbleu" and "Morbleu," and the German "Donnerwetter" and "Donner und blitzen," are all appeals to God as the Ruler of the Universe. The psychology as well as the etymology of these expressions is certainly an interesting study.

SAPROPHYTIC EXISTENCE OF TRICHOPHYTON ENDOTHRIX.

To the Editor of THE LANCET.

SIR,—Perhaps the following may interest some of your readers. I have been growing and mounting pure cultures of the above fungi from hairs that have been in my possession over eight years. I know there are some dermatologists who think it probable that ringworm fungi may pursue a saprophytic existence; but does not the fact of growing cultures from these hairs prove that trichophyton fungi live a double life, both parasitic and saprophytic?

I am, Sir, yours faithfully,

Maldon, Essex, April 28th, 1914. CHARLES DIBBEN.

MEDICAL PRACTICE IN SWEDEN.

THE conditions of the Public Health Medical Service in Sweden will be found described briefly in THE LANCET, Vol. II., 1911, p. 244. The standard of medical education is unusually high in that country, and it is not rare for the medical curriculum to last over eight years. A special feature is the importance attached by the authorities to the holding of resident hospital appointments. Medical diplomas other than those of the three Swedish Universities are not recognised, and the foreigner wishing to practise in the country would have to pass its medical examinations. During the last few years there has been a growing dearth of medical men in Sweden, and it is therefore possible that on application to the authorities the possessor of a first-class foreign diploma might be allowed to practise without passing all the examinations usually considered necessary.

THE LONDON SURGICAL HOME.

To the Editor of THE LANCET.

SIR,—In the Obstetrical Transactions for 1863 I find Mr. Baker Brown described as "Senior Surgeon to the London Surgical Home." Can you tell me what "the London Surgical Home" was and what became of it?

I am, Sir, yours faithfully,

Leeds, April 27th, 1914. J. B. HELLIER, M.D. Lond.

*** The London Surgical Home for Diseases of Women was established in 1858 at 12, Osnaburgh-place, Regent's Park, London. It was "for respectable females suffering from curable surgical diseases." The surgeon was "Baker Brown, Esqr." Mr. Isaac Baker Brown resided at 17, Connaught-square, Hyde Park, and 5, Stanley-terrace, Notting Hill. What became of the Home we cannot trace.—ED. L.

ALCOHOL AND LONGEVITY.

To the Editor of THE LANCET.

SIR,—I was very glad to read in THE LANCET of April 18th, p. 1127, that the question of alcohol and longevity, and the statistics which point beyond cavil to the advantages to health from the practice of total abstinence, as evidenced by some insurance statistics, is not endorsed after a careful survey. The reasons given are entirely in accord with my investigation of the subject, carried on now for ten years. I have found these total abstainers who insure are more careful living men, less excitable in disposition, and do not indulge in such violent games and exercises, or are so fond of adventures where there is an element of danger, as those who partake of alcohol. In brief, the alcohol, if drank in strict moderation, has nothing to do with the statistics, but solely the personal element of the insured person.

A very good and practical illustration, which certainly tends to prove that the moderate use of alcohol makes for longevity, is the case of a very near relative of mine, who died at the age of 84 from influenza. The old lady had always taken her wine or beer for dinner and whisky before going to bed. She had a great belief in virtues of beer, stating it prevented constipation and fermentation in the bowels. She was never ill all her life, and only kept her bed during maternal duties; never had to visit a dentist, the teeth merely falling out as the gum receded, and never wore glasses, reading the papers a week before her death. From long clinical experience I believe that pure beer is a most wholesome beverage, especially for growing boys and girls.

I am, Sir, yours faithfully,

THOMAS DUTTON.

New Cavendish-street, W., April 23rd, 1914.

Income Tax.—The proceeds of the sale of our correspondent's practice should be credited to capital account, and therefore should not be returned as income for assessment to tax. When he purchases another practice the expenditure will be debited to capital account, and will not be allowed as a charge against the profits of the practice.

Enquirer.—It would be advisable for a patient with granular kidneys and a tendency to glycosuria to refrain from taking a beverage which contains both alcohol and sugar, even in small quantities.

ERRATUM.—In our annotation last week on Kubisagari the reference should have been to the *Révue de Médecine*, not to the *Presse Médicale*. We regret the slip.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced.

In 1914:—

May 1st–Nov. 1st (Lyons).—International Town Hygiene Exhibition.
,, 15th–Oct. 15th (Berne).—Swiss National Exhibition.
,, 18th–21st (London, Imperial Institute).—Victoria League Imperial Health Conference.
May–October (London, Shepherd's Bush).—Anglo-American Exposition.
June 8th–10th (Berne).—Seventh International Dairy Congress.
,, 18th–24th (London, Church House, Westminster).—International Conference on the Blind.
June–July (Groningen).—University of Groningen 300th Anniversary Celebration.
July 6th–11th (Blackpool).—Twenty-ninth Congress of the Royal Sanitary Institute.
,, 8th–10th (Oxford).—Ophthalmological Congress.
,, 15th–20th (Edinburgh).—Congress of the Royal Institute of Public Health.
,, 21st–23rd (Chester).—British Pharmaceutical Conference.
,, 27th–31st (London).—Fifth Annual Session of the Clinical Congress of Surgeons of North America.
,, 28th–31st (Aberdeen).—Eighty-second Annual Meeting of the British Medical Association.
Aug. 3rd–8th (London).—Sixth International Dental Congress.
,, 10th–15th (St. Petersburg).—Twelfth International Congress of Ophthalmology.
Sept. 7th–12th (Berne).—International Congress for Neurology, Psychiatry, and Psychology.
,, 21st–26th (Vienna).—Third International Congress on Diseases of Occupation.
,, 30th–Oct. 3rd (Brussels).—Fourteenth French Congress of Medicine.
Oct. 31st–Nov. 2nd (Berlin).—First Congress of the International Society for Sexual Research.
Nov. 15th–21st (London).—Health Week. (Under the direction of the Health Week Committee appointed by the Royal Sanitary Institute.)
(St. Petersburg).—Third Mendeléeff Congress on Pure and Applied Chemistry and Physics.

In 1915:—

May 31st–June 5th (London, South Kensington).—Sixth International Congress of Social Work and Service.
Sept. 8th (begins) (Manchester).—Meeting of the British Association.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY.—(4 P.M., Election of Fellows.) Lord Rayleigh, O.M.: (1) Some Calculations in Illustration of Fourier's Theorem; (2) On the Theory of Long Waves and Bores.—Sir Joseph Larmor and Mr. J. S. B. Larmor: On Protection from Lightning and the Range of Protection Afforded by Lightning Rods.—Mr. E. N. Da C. Andrade: The Flow in Metals Subjected to Large Constant Stresses (communicated by Prof. A. W. Porter).—Prof. E. Wilson: On the Properties of Magnetically-shielded Iron as Affected by Temperature (communicated by Prof. J. A. Fleming).—Mr. G. I. Taylor: Eddy Motion in the Atmosphere (communicated by Dr. W. N. Shaw).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

TUESDAY.

SECTION OF SURGERY: SUB-SECTION OF ORTHOPÆDICS (Hon. Secretaries—A. S. Blundell Bankart, E. Rock Carling): at 5 P.M.

Annual Meeting.—Election of Officers and Council for Session 1914-1915.

SECTION OF PATHOLOGY (Hon. Secretaries—Gordon W. Goodhart, C. Price-Jones): at 8.30 P.M.

Annual Meeting.—Election of Officers and Council for Session 1914-1915.

Dr. H. C. Ross: The Similarity between the Artificially Induced Figures of Cell Division in Mononuclear White Blood Cells and those Found Occurring in the Blood under Natural Conditions in Pernicious Anæmia.

Dr. E. F. Bashford and Dr. J. A. Murray: Observations on the Mechanism of Cell Division (with kinematograph demonstration).

WEDNESDAY.

SECTION OF OPHTHALMOLOGY (Hon. Secretaries—J. Herbert Parsons, Leslie Paton): at 8 P.M.

Cases:

Papers (at 8.30 P.M.):

Mr. E. Affleck Greeves: Pathological Observations on the Filtration Angle in Some Glaucoma Cases.

Lieut.-Col. Herbert: The Ideal Glaucoma Incision.

Mr. N. Bishop Harman: A Variable Flap Operation for Chronic Glaucoma.

Mr. W. G. Laws: Herbert's Small-flap Operation for Glaucoma.

THURSDAY.

SECTION OF OBSTETRICS AND GYNÆCOLOGY (Hon. Secretaries—T. Watts Eden, C. Hubert Roberts): at 8 P.M.

Annual Meeting.—Election of Officers and Council for Session 1914-1915.

Specimens:

Mrs. Willey, M.D.: Submucous Fibroid showing Implantation of the Placenta on the Tumour.

Dr. C. E. Pursiow: (1) Red Degeneration of Uterine Fibroid with Very Early Gestation; (2) Uterus with Multiple Fibroids and Placenta Prævia.

Dr. J. P. Hedley: Fœtal Bones Removed from the Uterus Three Years After a Miscarriage.

Mr. Joseph Adams: Case of Carcinoma of the Uterus in a Child aged 2½ Years.

Dr. Herbert Williamson: Intussusception through a Gastro-enterostomy Wound Occurring during Labour.

Mr. Clifford White: Volvulus of the Cæcum Occurring in Connection with Labour.

Paper:

Dr. James Young: The Etiology of Eclampsia.

FRIDAY.

CLINICAL SECTION (Hon. Secretaries—W. Essex Wynter, Thomas H. Kellock): at 8.30 P.M.

Cases:

Dr. Clive Riviere: Spleno-myelogenic Leukæmia.

Mr. Sidney Boyd: Splenectomy for Splenomegalic Cirrhosis with Ascites.

Dr. Arthur Hertz: Three Cases of Thomsen's Disease in Members of the Same Family.

Dr. Parkes Weber: (1) Progressive Vertebral Ankylosis (Spondylose Rhizomélique); (2) Specimen from a Case of Spasmodic Stricture of the Œsophagus (cardiospasm) with Fusiform Dilatation above it.

And other Cases.

Short Paper:

Dr. J. Alison Glover: Rupture of an Aneurysm of the Abdominal Aorta in a Young Woman.

RÖNTGEN SOCIETY.

TUESDAY.—Paper:—Mr. L. W. Bragg (Cambridge): X Rays and Crystals.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Dr. Redmond's Motion re Library. Clinical Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY.—5 P.M., Mr. Shattock: Specimens illustrating Sarcoma. (Museum Demonstration.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

TUESDAY.—4 P.M., Dr. P. Stewart: Clinique (Medical). 5.15 P.M., Lecture:—Dr. A. J. Jex-Blake: Lardaceous Disease and Tuberculosis.

WEDNESDAY.—4 P.M., Mr. P. Turner: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. L. Evans: Knock-knees.

THURSDAY.—4 P.M., Mr. J. E. Adams: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. H. C. Cameron: The Use of X Rays in the Diagnosis of Disease in Children.

FRIDAY.—4 P.M., Mr. A. Levy: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. Mr. B. Harman: Diseases of the Eye.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Dr. Simson: Diseases of Women and Eye Department.

THURSDAY.—9 A.M., Dr. Bernstein: Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Mr. B. Harman: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. H. B. Carlill: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. E. Zundel: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Sir Malcolm Morris: Skin.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. B. Carlill: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery. 2.15 P.M., Special Lecture:—Dr. F. Taylor: Rigors.

THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. H. R. Prentice: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Dr. R. Wells: Medicine. 4.30 P.M., Special Lecture:—Sir William Bennett, K.C.V.O.

FRIDAY.—Out-patient Demonstrations:—10 A.M., Dr. C. E. Zundel: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine. 3.15 P.M., Mr. L. McGavin: Surgery.

SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. R. Prentice: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—10 A.M., Col. Barry: Radiography.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. H. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Gynæcological (Dr. Banister). 3 P.M., Medical In-patients (Dr. R. M. Leslie).

TUESDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Nose, Throat, and Ear (Mr. H. D. Gillies). X Ray and Electrical Methods (Dr. Metcalfe). 3.30 P.M., Medical In-patient (Dr. Whiting).

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. Dorell).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson); X Rays and Electrical Methods (Dr. Metcalfe).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL (UNIVERSITY OF LONDON), Albert Embankment, S.E.

Lectures in Advanced Medical Subjects:—

TUESDAY.—5 P.M., Dr. H. Maclean: Carbohydrate Metabolism in Health and in Diabetes.

GUY'S HOSPITAL MEDICAL SCHOOL, London Bridge, S.E.

Course of Lectures on Industrial Medicine:—

FRIDAY.—Lecture I.:—Dr. P. Shufflebotham: The Symptoms and Diagnosis of Lead Poisoning.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, Medical School, City-road, E.C.

MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Cardiac Department, Dr. Stott; Out-patient Department, Dr. Phear, Dr. S. Thompson. 3 P.M., Wards, Dr. Phear.

TUESDAY.—9 A.M., Laryngological Department, Mr. Mant. 1.30 P.M. Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. M. Leslie, Dr. B. King; Operations, Mr. A. Evans. 3 P.M., Wards, Dr. White. 4 P.M., Wards, Dr. M. Leslie

WEDNESDAY.—2 P.M., Wards, Dr. A. Davies; Out-patient Department, Dr. Drysdale, Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan.

THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 10 A.M., Cardiac Department, Dr. Stott. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. Phear, Dr. S. Thompson. 4.30 P.M. Laryngological Department, Mr. Mant.

FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert; Out-patient Department, Dr. M. Leslie, Dr. B. King.

SATURDAY.—10 A.M., Out-patient Department, Dr. Drysdale, Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.

Course of Demonstrations for Post-Graduates:—

WEDNESDAY.—4 P.M., Dr. H. Walsham: Demonstration of X Ray Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY AND FRIDAY.—3.30 P.M., Clinical Lectures:—Dr. G. Holmes: Differential Diagnosis of Cerebral Tumours.

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

LONDON LOCK HOSPITAL, 91, Dean-street, Soho, W.

Special Course of Instruction in Venereal Diseases, for Post-Graduates and Students, with Practical Demonstrations of the Various Methods of Treatment:—

MONDAY.—Clinics:—1 P.M., Mr. Ryall; 6 P.M., Mr. Gibbs.
TUESDAY.—Clinics:—2 P.M., Mr. Lane; 6 P.M., Mr. Paterson.
WEDNESDAY.—Clinic:—6 P.M., Mr. Shillitoe.
FRIDAY.—4 P.M., Lecture:—Mr. McDonagh: The Treatment of Venereal Diseases.
SATURDAY.—Clinic:—2 P.M., Mr. McDonagh.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.

MONDAY.—5 P.M., General Meeting.
TUESDAY.—3 P.M., Prof. W. Bateson: Double Flowers.
FRIDAY.—9 P.M., Prof. K. Pearson: Albinism in Men and Dogs.

ROYAL SANITARY INSTITUTE, 90, Buckingham Palace-road, S.W.

TUESDAY.—7 P.M., Lecture:—Dr. M. S. Pembrey: Physical Games versus Set Exercises.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS.

TUESDAY.—MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES, Quay-street.—4.30 P.M., Dr. G. H. Lancashire: Eczema and Seborrhœa.
WEDNESDAY.—ROYAL INFIRMARY—4.30 P.M., Mr. W. H. Hey: Inoperable Malignant Disease.
THURSDAY.—ANCOATS' HOSPITAL—4.30 P.M., Mr. J. Morley: Gall Stones.

UNIVERSITY OF SHEFFIELD, at the University.

Post-Graduate Course on Syphilis:—

TUESDAY.—3 P.M., Prof. Dean: Application of Wassermann Reaction to Diagnosis, Prognosis, and Treatment. General Pathology of Syphilis as Modified by Recent Research. Latent Syphilis. Parenchymatous Syphilis. Inherited Syphilis.
FRIDAY.—3 P.M., Prof. Dean: General Principles of Chemiotherapy. The Work of Ehrlich and his School. Relations between Chemical Constitution and Specific Action. Atoxyl and Other Arsenical Compounds. Salvarsan.

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

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Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London County and Westminster Bank, Covent Garden Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

TO COLONIAL AND FOREIGN SUBSCRIBERS.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 29th, 1914.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 23	30·25	S.W.	...	85	60	49	51	53	Cloudy
,, 24	30·34	S.W.	...	113	63	45	48	52	Fine
,, 25	30·28	N.E.	...	110	56	52	48	53	Cloudy
,, 26	30·57	E.	...	109	60	41	46	50	Fine
,, 27	30·48	E.	...	97	66	41	48	51	Fine
,, 28	30·35	S.E.	...	109	66	46	52	55	Fine
,, 29	30·09	S.E.	...	109	70	42	48	50	Fine

The following journals, magazines, &c., have been received:—Philippine Journal of Science, Revue d'Hygiène, Journal of Anatomy and Physiology, British Journal of Dermatology, Canadian Medical Association Journal, Interstate Medical Journal, St. Mary's Hospital Gazette, Bedrock, Charing Cross Hospital Gazette, St. George's Hospital Gazette, American Journal of Obstetrics, Journal of Mental Science, Indian Medical Gazette, South African Medical Record, New Zealand Medical Journal, Medical Journal of South Africa, Archives of Internal Medicine, Guy's Hospital Gazette, &c.

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